

A background image of a modern data center with rows of server racks. The scene is overlaid with large, semi-transparent circles in shades of blue, red, green, and yellow. The text "2023 SUSTAINABILITY REPORT" is centered in white, bold, sans-serif font.

**2023
SUSTAINABILITY REPORT**

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INTRODUCTION



ABOUT THIS REPORT

Published in May 2023, this report covers the calendar year 2022 and represents the best available information at the time of publishing. This report has been prepared based on GRI (Global Reporting Initiative) standardized metrics, presented in [Appendix 3: Standardized Metrics](#). It was formally reviewed and overseen by the Board of Managers and our Senior Management Team, in collaboration with our Sustainability Working Group. The primary data in this report [has been assured](#) to a moderate level (“type 2”) by ISOS Group, Inc. For more information on sustainability programs at CyrusOne, visit the [CyrusOne ESG website](#).

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LETTER FROM THE CEO

At CyrusOne, we build data centers for a sustainable future. Our data centers will operate for decades, so we take into account current and future conditions in each region of the globe where we operate. Our sustainability mindset is a vital component of preparing our operations for success now and for many years to come.

2022 was a year of key milestones for our sustainability programs with important achievements in each of our "Big Four" environmental categories: climate, water, biodiversity, and circularity.

- **Climate:** Our climate targets received validation from the Science Based Targets initiative (SBTi), and for the first time more than 50% of the electricity powering our facilities was covered by zero-carbon renewable sources.
- **Water:** We achieved *net positive water* status for all of our data centers in regions with extremely high water stress.
- **Biodiversity:** Our data center in Allen, Texas received our first National Wildlife Federation habitat certification.
- **Circularity:** We implemented on-site customer E-waste recycling service at all of the US facilities we operate.

These achievements demonstrate our commitment to customers and regulators, and they have real benefits to our business.

- The long-term renewable electricity contracts that we sign today decrease greenhouse gas emissions and also insulate us from price volatility in the electricity market for years to come.
- Eliminating our reliance on water for cooling our data centers benefits local communities and watersheds and also protects us from potential shutdowns or costly upgrades due to projected future water scarcity.
- Landscaping with native species provides food and shelter for pollinators and other wildlife and saves money on water, chemicals, and maintenance.

- E-waste recycling service keeps valuable and hazardous materials out of the waste stream and enhances the customer service we're known for by making it easy for our customers to manage their own waste.

I'm very proud of what our team has achieved over the past few years, and I'm not the only one who appreciates our progress. CyrusOne received a number of prestigious awards and recognitions for our initiatives and leadership in 2022. For example, the Business Intelligence Group recognized our *net positive water* colocation services at Dallas in the category "Sustainability Service of the Year," while also choosing CyrusOne's VP of Environmental Health, Safety, and Sustainability Kyle Myers as one of its four "Sustainability Heroes of the Year."

Recognitions like these help confirm that we are on the right track and inspire us to keep pursuing loftier goals, such as bringing forward the timeline for our global *climate neutral* pledge from 2040 to 2030 – a goal we plan to achieve while simultaneously decreasing our water use.

Thank you for being part of our sustainability mission, whether you are a customer, teammate, vendor, or other stakeholder. We are especially grateful to our customers for inspiring us with their own ambitious commitments to decreasing our industry's environmental impacts and promoting a more sustainable future. We look forward to continuing the partnership.



Eric Schwartz
CEO



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WHAT WE DO

CyrusOne is a leading global data center developer and operator specializing in delivering state-of-the-art digital infrastructure solutions. With more than 50 high-performance mission-critical facilities worldwide, the Company ensures the continued operation of digital infrastructure for nearly 800 customers, including approximately 200 Fortune 1000 companies.

CyrusOne's global platform of hybrid-cloud and multi-cloud deployments offers customers colocation, hyperscale, and build-to-suit environments, which help enhance the strategic connections of their essential digital infrastructures and support the achievement of sustainability goals. CyrusOne data centers offer world-class flexibility, enabling clients to modernize, simplify, and rapidly respond to changing demands. Combining exceptional financial strength, a broad global footprint, and continued investment in key digital gateway markets, CyrusOne provides the world's largest companies with long-term stability and strategic advantages at scale.

TRANSITION TO PRIVATE COMPANY

On March 25, 2022 CyrusOne announced the completion of its acquisition by funds managed by [KKR](#), a leading global investment firm, and [Global Infrastructure Partners](#) (GIP), one of the world's leading infrastructure investors, in an all-cash transaction valued at approximately \$15 billion, including the assumption of debt. For a description of the new Board structure and changes in governance, see [Corporate Governance](#).



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HOW WE OPERATE

As a colocation data center real estate company, CyrusOne shares some features with in-house data centers and commercial real estate companies, but there are also important differences. The sections below describe how we compare to these two types of operations.

COLOCATION VS. IN-HOUSE DATA CENTERS

CyrusOne is a colocation data center company. This means that we build data halls and support infrastructure (such as the ability to deliver electricity and cooling) so customers can lease space and install their servers in our data halls. This has several important implications and distinctions from in-house data centers:

- **Designed for Flexibility:** Colocation data centers must be designed and built to handle a wide variety of customer loads, equipment types, and capacities. Except for our build-to-suit environments, which are designed to a single customer's exact specifications, our data centers are designed for flexibility and rarely run close to their maximum design capacity (see [Energy Efficiency](#)).
- **Support Role:** Colocation data center operators do not control the specification or installation of servers. CyrusOne supports our customers in planning and move-in, but ultimately our customers make crucial decisions around server efficiency, cold aisle containment, rack cooling solutions, and end-of-life recycling.
- **Required Resilience:** Colocation data centers promise uptime to customers through redundant systems, comprehensive maintenance, and business continuity planning. While in-house data center operators might strategically allow some of their data halls to go offline during outages, that is not an option for us. For this reason, backup power generation is required. We continue to explore and evaluate alternative technologies to provide the same power resilience with fewer carbon emissions.

COLOCATION VS. COMMERCIAL REAL ESTATE

CyrusOne is not just a real estate company, but is specifically a data center real estate company. This means that CyrusOne's real estate portfolios are data centers, and the space is utilized primarily by computer servers. This differentiates us from commercial real estate companies which operate office buildings or commercial spaces in several ways:

- **Digital Occupancy:** Occupancy in our portfolio refers to the installation of servers in a data hall rather than people, so topics of occupant wellness or comfort are not of primary importance to our design and operations.
- **Energy Density:** Data centers use much more energy per square foot than most buildings. Within a data center, the data halls use the most energy per square foot. Depending on the type of electricity the facility is currently using, this can also equate to a high carbon intensity compared to other types of real estate.
- **Episodic Waste:** Data centers don't generate waste in the same way other commercial real estate does. Our most frequent waste sources are break rooms and bathrooms, which contribute low amounts of waste from a small population of technical support, facility maintenance, security staff, and guests. To support customer move-in, we also provide recycling for the cardboard boxes, crates, and pallets used to move equipment. This move-in waste may be generated over the span of a few months, followed by years of little waste until a customer does a major hardware upgrade, or new customers move in.

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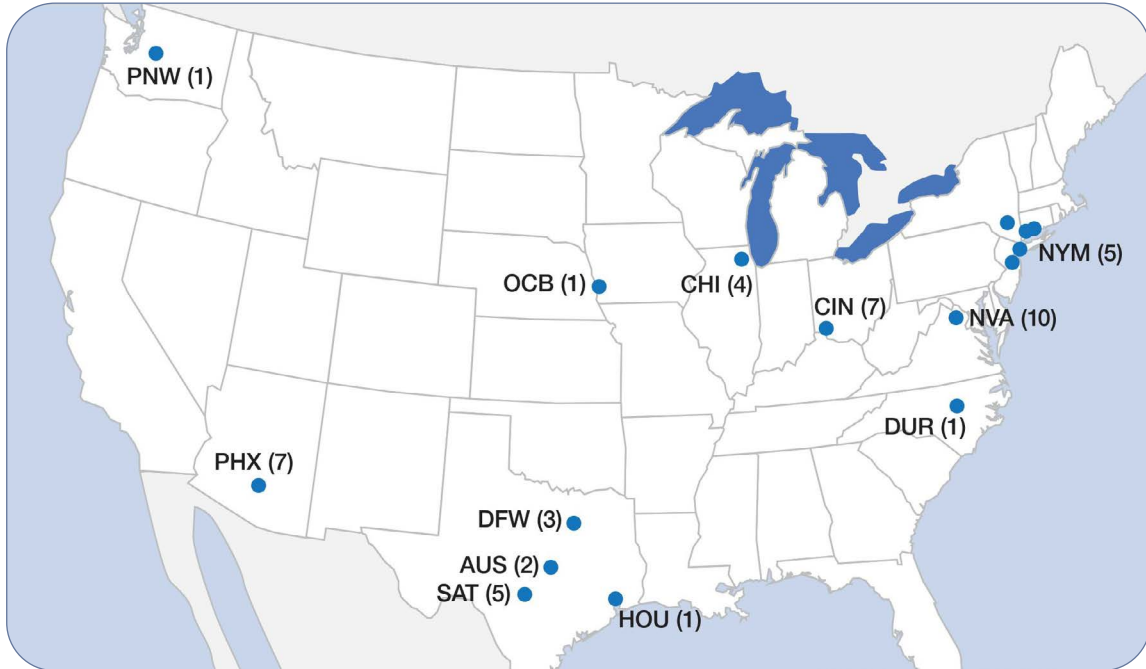
WHERE WE OPERATE

We provide mission-critical data center facilities that protect and ensure the continued operation of IT infrastructure for approximately 800 customers, including roughly 200 Fortune 1000 companies. CyrusOne offers a tailored, customer service-focused platform and is committed to full transparency in communication, management, and service delivery throughout its more than 50 data centers worldwide, which are located primarily in the US and Europe and shown in the maps below (including facilities under construction and projects in pre-development). Additional information about CyrusOne can be found at www.CyrusOne.com.

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UNITED STATES



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MEETING THIRD-PARTY STANDARDS

This report has been designed to provide disclosure compatible with four third-party standards.

TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES (TCFD) RECOMMENDATIONS

As part of our commitment to meeting the recommendations of the TCFD, we have structured this report around the four recommended topics: Governance, Strategy, Risk Management, and Targets and Metrics. Though not specifically addressed by the TCFD recommendations, we also report on additional highly relevant topics of water conservation, biodiversity, circular economy, and social responsibility.

Taskforce on Climate-Related Financial Disclosures (TCFD) Index	
Topic	Section
Governance	
Board oversight of climate-related risks and opportunities	Board Oversight
Management role in assessing and managing climate-related risks and opportunities	Senior Management Direction, Cross-functional Integration and Coordination
Strategy	
Climate-related risks and opportunities	Climate Risk (Risks and Impacts , Opportunities and Impacts)
Impact of climate-related risks and opportunities	Climate Risk (Risks and Impacts , Opportunities and Impacts)
Resilience of organization's strategy	Climate Risk (Scenario Analysis and Resilience)
Risk Management	
Process for identifying and assessing climate-related risks	Climate Risk (Risk Identification)
Process for managing climate-related risks	Climate Risk (Managing Climate Risk)
Integration into overall risk management	Climate Risk (Managing Climate Risk)
Metrics & Targets	
Metrics used to assess climate-related risks and opportunities	Appendix 3: Standardized Metrics (TCFD) Climate Impact (Metrics and Targets)
Scope 1, 2, and 3 GHG emissions	Climate Impact (Metrics and Targets)
Targets and performance against targets	Metrics and Targets Summary

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GLOBAL REPORTING INITIATIVE (GRI) STANDARDS

To provide transparency, this report has been prepared in accordance with the GRI Standards: Core option. Required elements are found throughout the report:

- **Materiality assessment** was performed based on guidance from GRI 101 Foundation, using the dimensions of importance to stakeholders and impact to the environment or society.
- **Management Approach Disclosures** for material issues are detailed on a company-wide basis in the [ESG Strategy](#) section. Then, in each of the topic-focused chapters ([Social Responsibility](#) and [Environmental Impact](#)), we discuss our management approach for specific topics (e.g., energy, water, biodiversity), as well as specific approaches for subtopics (e.g., energy-efficient building design, energy-efficient operations).
- **Topic-Specific Disclosures** for material issues are included in [Appendix 3: Standardized Metrics](#). They are labeled with the GRI disclosure numbering system for ease of reference.

SUSTAINABILITY ACCOUNTING STANDARDS BOARD (SASB) GUIDANCE

To benefit from the SASB guidance, we have included all relevant recommended metrics from our assigned category, Real Estate (IF-RE). However, since this Real Estate standard is not specific to data centers, we also referenced relevant guidance and metrics for the Internet Media & Services standard (TC-IM). We hope that this combination of metrics will provide a more useful picture for our customers and other stakeholders. Our standardized SASB metrics are listed in [Appendix 3: Standardized Metrics](#).



THIRD-PARTY ASSURANCE

The primary data in this report has been assured to a moderate level ("type 2") by ISOS Group, Inc. The assurance statement can be found in [Appendix 4](#), and assured data is marked throughout the report with the stamp shown here.



Dallas (DFW1)

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SUSTAINABLE DEVELOPMENT GOALS (SDG) ALIGNMENT

The following chart illustrates our alignment with the United Nations' Sustainable Development Goals. To make sure that our targets are directly related, rather than just thematically related, we specify the SDG Indicator that our target will quantitatively affect. We have thematic connections to other SDG Goals, but their specific SDG Indicators are metrics that our activities do not directly affect, so they are not listed.

CyrusOne Sustainable Development Goals Alignment				
SDG Goal	SDG Target	SDG Indicator	Sustainability Report Section	CyrusOne Target
 <p>6 CLEAN WATER AND SANITATION</p>	<p>Target 6.4: By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity</p>	<p>Indicator 6.4.1: Change in water use-efficiency over time;</p> <p>Indicator 6.4.2: Level of water stress: freshwater withdrawal as a proportion of available freshwater resources</p>	Water	<p>Net positive water in high-stress regions</p> <p>100% water-free cooling in new data centers</p>
 <p>7 AFFORDABLE AND CLEAN ENERGY</p>	<p>Target 7.2: By 2030, increase substantially the share of renewable energy in the global energy mix</p>	<p>Indicator 7.2.1: Renewable energy share in the total final energy consumption</p>	Energy	All facilities with renewable electricity option
	<p>Target 7.3: By 2030, double the global rate of improvement in energy efficiency</p>	<p>Indicator 7.3.1: Energy intensity measured in terms of primary energy and GDP</p>	Energy	Energy Efficiency Activities
 <p>9 INDUSTRY, INNOVATION AND INFRASTRUCTURE</p>	<p>Target 9.4: By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities</p>	<p>Indicator 9.4.1: CO₂ emission per unit of value added</p>	Climate Impact	<p>All facilities with renewable electricity option</p> <p>Climate neutral by 2030</p> <p>SBTI Near-term Carbon Target</p>
 <p>12 RESPONSIBLE CONSUMPTION AND PRODUCTION</p>	<p>Target 12.6: Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle</p>	<p>Indicator 12.6.1: Number of companies publishing sustainability reports</p>	Transparency	This report
 <p>15 LIFE ON LAND</p>	<p>Target 15.5: Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species</p>	<p>Indicator 15.5.1: Red List Index</p>	Biodiversity	<p>Improve habitat at each facility</p> <p>Protected Areas Assessments</p>

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METRICS AND TARGETS

To measure progress toward our sustainability goals, we have created a set of primary metrics and targets shown in the table below. These are the critical metrics that we find most relevant to measuring our progress and against which we set targets. Throughout this report, the primary metrics and targets for each topic are detailed in the relevant sections. For a full list of metrics and their descriptions see [Appendix 2: Primary Metrics](#).

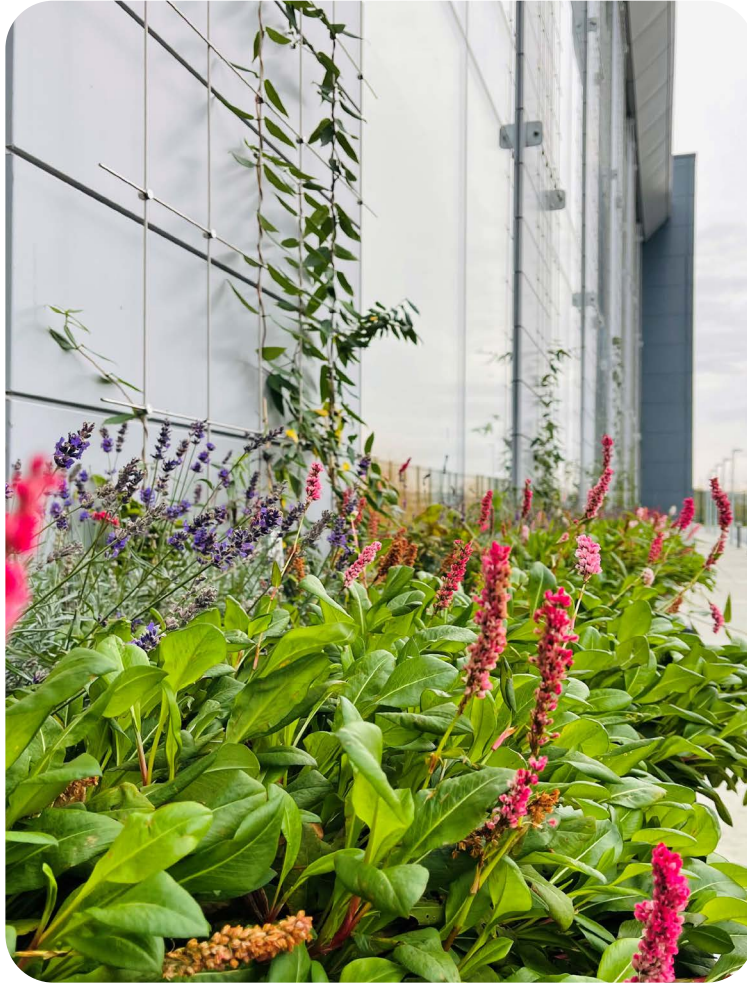
Metrics and Targets Summary				
Primary Metrics	UOM	2022 Level	Target Level	Section
Carbon Usage Effectiveness (CUE)	kg CO ₂ e/IT kWh	0.28	Climate neutral by 2030	Climate Impact
Building Carbon Intensity	MTCO ₂ e/ft ²	0.16	Climate neutral by 2030	Climate Impact
Carbon Emissions, Scope 1 + 2 (location-based)	MTCO ₂ e	1,168,986	N/A	Climate Impact
Carbon Emissions, Scope 1 + 2 (market-based)	MTCO ₂ e	613,164	Climate neutral by 2030	Climate Impact
Carbon Emissions, Scope 3	MTCO ₂ e	296,914	Measure and reduce	Climate Impact
Facilities with Renewable Option	% of facilities	100%	100%	Energy
Electricity Procured as Renewable	% of all electricity delivered	51.4%	100%	Energy
Facilities in Europe Powered by Renewable Energy	% of facilities	100%	100%	Energy
Net Positive Water Facilities in High-Stress Regions	% of facilities in High-Stress Regions	53%	100%	Water
New Data Centers with Water-Free Cooling	% of new facilities	100%	100%	Building for Sustainability
Facilities with Improved Habitat	% of facilities	9%	100%	Biodiversity
Diverse Supply Chain Spend	% of Tier 1 & 2 US spend	18.4%	20% by 2024	Supplier Diversity
Employee Injury Rate (Total Recordable Incident Rate)	Incidents/200,000 hours worked	0.41	0.82	Employee Occupational Safety
Employee Injury Severity Rate (Days Away, Restricted, or Transferred Duty)	Incidents/200,000 hours worked	0.41	0.40	Employee Occupational Safety

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CHANGES IN SCOPE

During 2022, four Houston area facilities were sold as ongoing operations, with space leased back in one facility. Following Greenhouse Gas Protocol guidance, we have removed them from our scope and baseline (except for leased space) , and have restated prior years for all environmental metrics to provide an accurate year-over-year comparison of our current scope of facilities.



Dublin (DUB1) Green Wall

ALIGNMENT WITH REPORTING STANDARDS

In addition to our primary metrics, we have aligned our sustainability reporting with several industry standards to provide maximum transparency and to give our customers and other stakeholders accurate comparisons. These metrics mainly appear in [Appendix 3: Standardized Metrics](#).

DATA CENTER STANDARDS

Since we are a data center company, we follow industry-standard metrics developed by [The Green Grid](#), such as Power Usage Effectiveness (PUE), Carbon Usage Effectiveness (CUE), and Water Usage Effectiveness (WUE Site & WUE Source). For more details about these metrics, please see the [Energy, Climate Impact](#), and [Water](#) sections.

SUSTAINABILITY REPORTING STANDARDS

In addition to the description in [Meeting Third-Party Standards](#) that covers TCFD, SASB, and GRI, we go beyond our primary metrics to report on additional standardized metrics and methods from GRESB (formerly known as Global Real Estate Sustainability Benchmark), CDP Climate and Water, S&P CSA (Dow Jones Sustainability Index), and the World Resource Institute Greenhouse Gas Reporting Protocol (WRI GHGP). Specific primary metrics are included throughout the body of the report (with methods detailed in [Appendix 2: Primary Metrics](#)), and the full list of standardized metrics is detailed in [Appendix 3: Standardized Metrics](#). The primary data in this report [has been assured](#) to a moderate level ("type 2") by ISOS Group, Inc.

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ESG GOVERNANCE

CyrusOne is committed to institutional integrity and ethics throughout our organization. We seek to ensure the highest standards of business conduct through a variety of methods.

The management and execution of environmental, social, and governance initiatives occur at several levels in our company, as summarized by the [Board Oversight diagram](#) and detailed in the following sections.

BOARD OVERSIGHT AND COMPOSITION

One of the key functions of our Board of Managers (the "Board") is the oversight of our strategy and enterprise risk management, including in relation to environmental, social, and governance topics. The Board administers this oversight function directly with support from standing committees of the Board, each of which oversees strategy and risks specific to its respective area of responsibility:

1. **Investment, Strategy and Commercial Review**

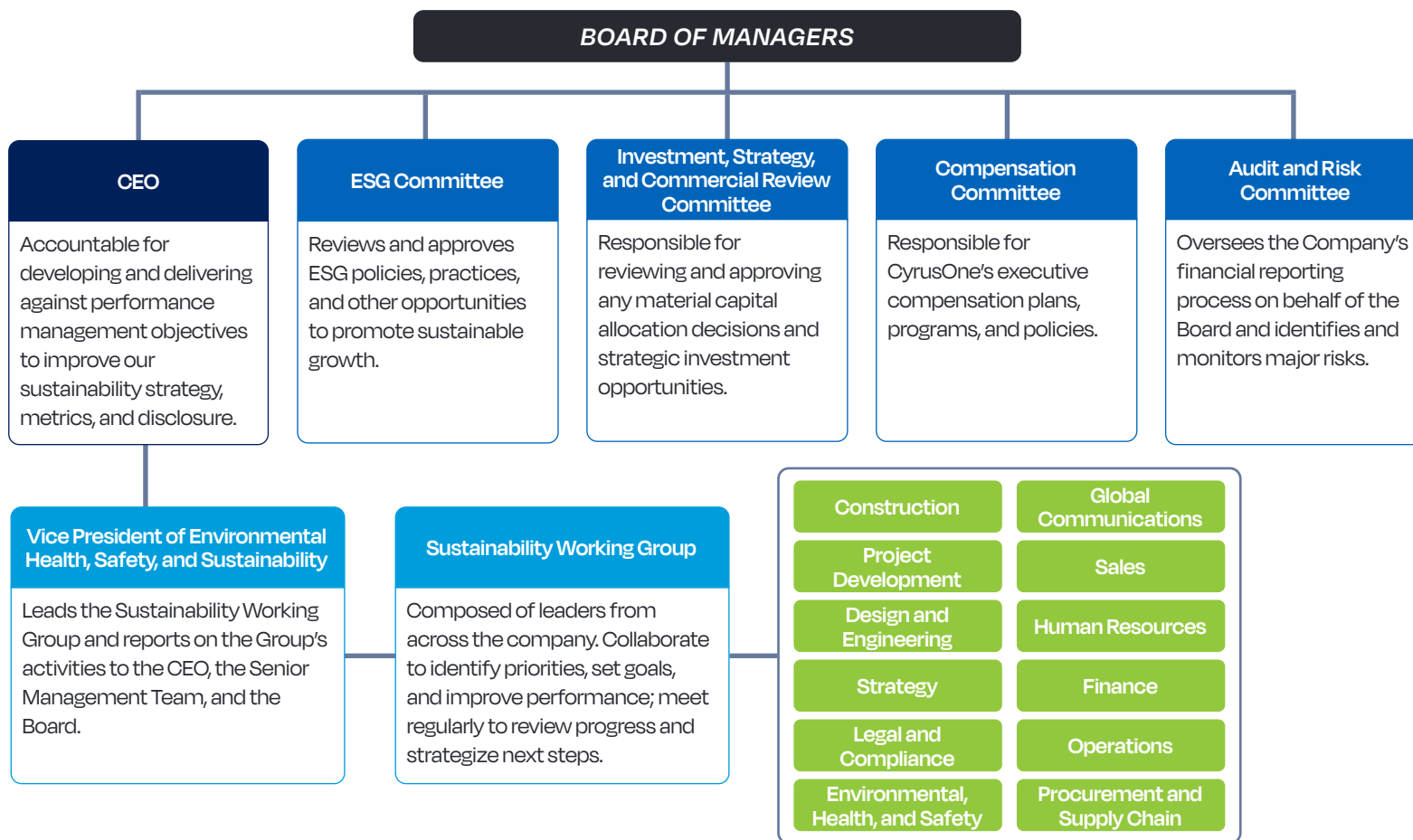
Committee: Reviews and approves the Company's capital and operating expenditures, investment policies, material capital allocation decisions, strategic investments and dispositions and other transaction opportunities.

2. **Environmental, Social and Governance ("ESG")**

Committee: Reviews and approves the Company's ESG policies, practices, and other opportunities in connection with fostering sustainable growth of the Company.

3. **Audit and Risk Committee:** Oversees our accounting and financial reporting processes as well as identifying and monitoring major financial, regulatory, security, enterprise, and operational risks.

4. **Compensation Committee:** Evaluates, approves, and administers all compensation, severance, and other similar plans, policies and programs and specifically reviews and approves compensation of teammates with a title of "senior vice president" or greater seniority.



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INVESTMENT, STRATEGY, AND COMMERCIAL REVIEW COMMITTEE

The Investment, Strategy, and Commercial Review Committee is responsible for reviewing and approving any material capital allocation decisions and strategic investment opportunities, including mergers, acquisitions, divestitures, joint ventures and real estate purchases. Furthermore, the Investment, Strategy, and Commercial Review Committee reviews the Company's investment policies and practices, in addition to approving any project leasing, project pricing or project underwriting guidelines. Environmental due diligence of acquisitions reports up to this committee.

ESG COMMITTEE

The ESG Committee reviews and approves ESG policies, practices, and other opportunities to promote sustainable growth. They assist the Board in discharging its oversight responsibility related to ESG matters, which may include climate change impacts, environmental sustainability (including the management of energy and water use), human rights and community relations, diversity, equity and inclusion, employee engagement, employee health and safety, business ethics and other ESG issues that are material to the Company. The ESG Committee also monitors developments related to improving the Company's understanding of ESG matters.

In furtherance of its mission, the ESG Committee formally adopted a goal for the Company to be *climate neutral* by the year 2030 for Scope 1 and 2 emissions. The Company has received multiple awards for its commitment to and accomplishments towards sustainability.

AUDIT AND RISK COMMITTEE

As mentioned in the [Introduction](#), CyrusOne is now a privately held company, so we no longer publicly disclose financial statements or regularly file reports with the SEC. However, we continue to be committed to implementing strong financial oversight. Company management is responsible for the preparation of CyrusOne's financial statements and the financial reporting process. This process includes implementing, maintaining, assessing, and reporting on effective internal control over financial reporting. The Audit and Risk Committee

oversees the Company's financial reporting process on behalf of the Board.

The Audit and Risk Committee is responsible for the appointment, compensation, and oversight of our independent auditor and monitoring their qualifications and independence. The Audit and Risk Committee, Company management, and the auditor review the audited financial statements annually. They also discuss the quality of the Company's accounting principles, the reasonableness of significant judgments, and the clarity of disclosures in the financial statements, and express an unqualified opinion on the Company's financial statements and internal controls. Furthermore, the Audit and Risk Committee reviews the Company's risk assessments and risk management policies, including by assessing the Company's major financial, regulatory, enterprise and operational risk exposure, cybersecurity, chain of custody and information systems for the reporting of actual or potential accidents, breaches, and incidents, disaster recovery, and other identified hazards and risks throughout the Company, except with respect to those risks for which oversight has been assigned to other committees of the Board or retained by the Board. The Audit and Risk Committee periodically reviews steps taken by Company management to mitigate or investigate and remediate any such risk exposure and to enhance the Board's understanding and the Company's oversight of the systems, policies, controls and procedures to manage and mitigate risk, respond to incidents, and protect critical infrastructure assets.

COMPENSATION COMMITTEE

The Compensation Committee is responsible for CyrusOne's compensation philosophy and policies, as well as the annual and long-term executive compensation program that flows from them. The Compensation Committee is specifically responsible for long-term equity and cash incentive awards and senior management's performance evaluations. Our long-term success depends in part on our ability to attract, motivate, focus, and retain highly talented individuals who are committed to our vision and strategy. A key objective of our compensation program is to create an ownership culture that aligns pay with performance and overall value creation.

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SENIOR MANAGEMENT DIRECTION

The Senior Management Team sets the strategic direction for the company. For topics related to operations within the company, the Operations Management Team has a lead role in most decisions regarding energy, water efficiency, and sourcing. Our CEO has ultimate oversight of ESG topics.

CROSS-FUNCTIONAL INTEGRATION AND COORDINATION

Our Sustainability Working Group (“SWG”) was established in 2019 to integrate sustainability and ESG strategy and planning into each function at the company, to coordinate cross-functionality, and to develop metrics and measure progress. The SWG is chaired by our Vice President of Environmental, Health, Safety, & Sustainability, and its membership consists of the leaders of functions across the company (see [Board Oversight diagram](#)). Updates on the SWG’s activities are provided monthly to the Senior Management Team and quarterly to the ESG Committee and the Board.

We take an integrated approach to embedding sustainability in foundational decision-making by working across departments and sharing best practices. This allows us to manage risks and create opportunities across the company rather than restricting sustainability functions to a single department.

HIGHLIGHT

Climbing Mount Sustainability

While our data centers contribute the largest part of our environmental impact, we don’t want to neglect our office spaces, where small changes can simultaneously improve sustainability and working conditions for our team members. With this in mind, CyrusOne’s UK Headquarters on Mount Street in London performed a number of in-office sustainability upgrades in 2022.

Improvements include:

- Switched to zero-carbon electricity
- Assessed and upgraded lighting to more energy-efficient solutions
- Improved recycling rates by 12% between January and December
- Chose office products with recycled content and/or that are designed for recycling
- Switched to low-impact alternative cleaning products
- Provided team members reusable tumblers to replace paper cups



Team members also established a sustainability plan for continued improvements in 2023, which includes ideas such as implementing composting for food waste and improving staff engagement through “green challenges” and educational emails. We look forward to refining our program in the coming years!

ESG STRATEGY

Across Environmental, Social, and Governance topics, we have conducted a sustainability materiality analysis and established priorities. We have identified topics having the greatest impact on our industry based on guidance from the Sustainability Accounting Standards Board (SASB) and our own assessments based on stakeholder feedback. Accordingly, we have done the most development on our programs that reduce our environmental impact while continuing to address social and governance topics. Please see our environmental and social vision statements along with our priorities and materiality for all three ESG topics below.

ENVIRONMENTAL VISION STATEMENT

At CyrusOne, we recognize that building and operating large data centers leads to a geographic concentration of environmental impacts, even if the total impact is reduced compared to the inefficiencies of smaller data rooms. Being a leader in this industry means embracing our responsibility for reducing those impacts.

We approach our environmental sustainability mission in three ways:

1. **Sustainable Future:** We build data centers that are compatible with a sustainable future. We cannot just build a data center to meet today's challenges; we need to build it with the future in mind.
2. **Energy and Water Conservation:** We are committed to conserving both energy and water through the effective design, maintenance, and operation of our facilities. We cannot just trade water for energy and ignore its impact.
3. **Strategic Partners:** We collaborate strategically with our customers to move their sustainability goals forward. Our customers have some of the most ambitious sustainability goals of any industry, so the best thing we can do for the environment is to help them succeed.

SOCIAL VISION STATEMENT

We recognize that we have an opportunity make a positive impact for our teammates, our community members, our suppliers, and our customers.

We approach our social sustainability mission in three ways:

1. **Inclusive and Equitable Future:** We work to support a world that's inclusive to all and where everyone has the opportunity to succeed. This includes a commitment to diversity and equity across all aspects of our business, as well as training and development opportunities to help our teammates and community members reach their full potential.
2. **Safety and Fairness Across the Value Chain:** We are committed to promoting safe and fair working conditions across our value chain, including suppliers, construction, operational contractors, teammates, and our communities.
3. **Strategic Partners:** We collaborate strategically with our customers to move their social responsibility goals forward. Our customers have some of the most ambitious social sustainability goals of any industry, so the best thing we can do to make a positive impact is to help them succeed.

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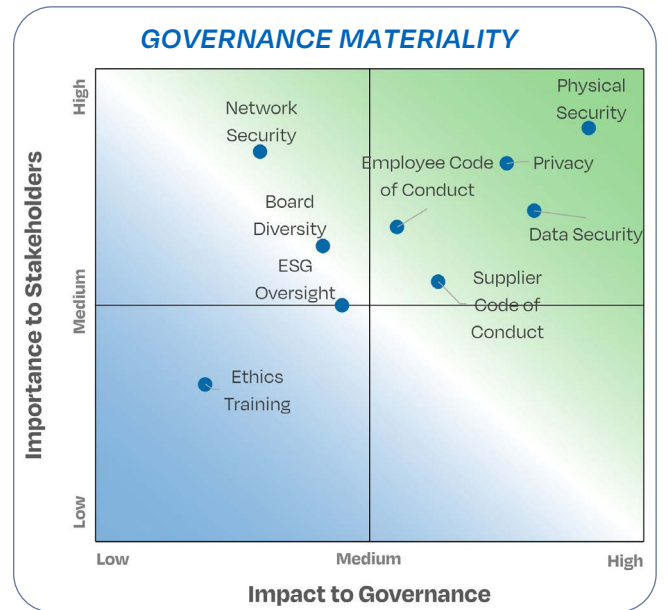
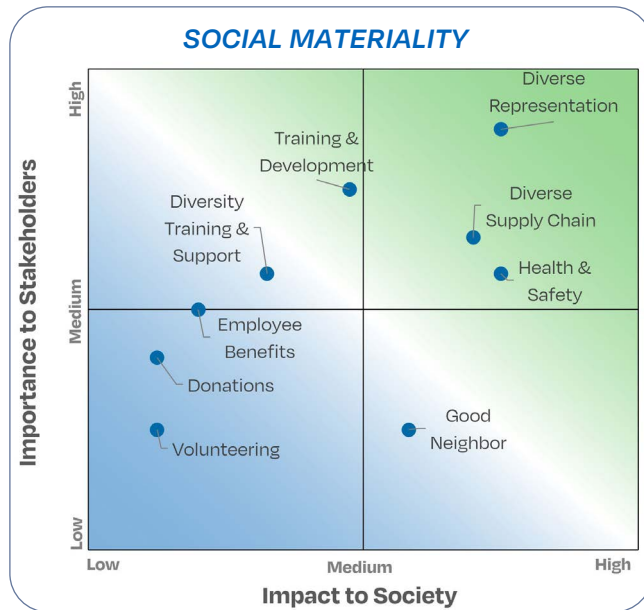
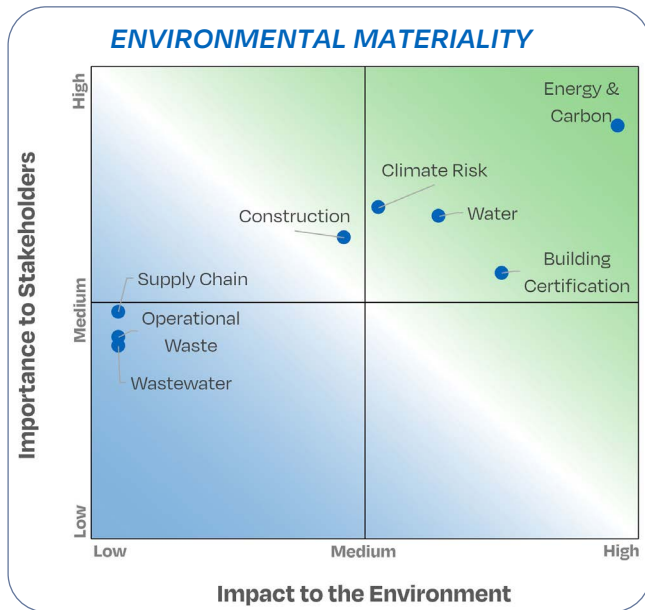
PRIORITIES AND MATERIALITY

Priorities for strategy and materiality for sustainability reporting are intrinsically related. We use a unified process to identify where we have the biggest sustainability impacts and where we should therefore focus our improvements. ESG covers many different topics, so it was important to identify which topics are necessary for us to report and which issues to set aside. To make this distinction, we conducted a materiality assessment based on GRI guidance.

Our Environmental Materiality Assessment was conducted in preparation for the 2020 report. The materiality assessment on Social and Governance topics was last conducted for the 2021 report. Details of the methodology for these assessments can be found in [Appendix 1: Methodology](#).

We rated Environmental, Social, and Governance topics on two scales: **Impact** on society or the environment and **Importance** to stakeholders. Combining Impact and Importance gives us the following heat maps of Environmental, Social, and Governance topics, with topics in the top right (green) requiring the most attention and topics in the bottom left (blue) needing the least. The guidance for our sector from SASB (Real Estate) suggests a focus on environmental topics as a primary concern, but we also display social and governance topics on their own scales as well. Discussion of reasoning for each topic is listed below in the sections [What's In, What's Out](#).

Since being taken private in 2022, we have removed *Board Independence* from the Governance Materiality assessment since the Board of Managers and our owners represent the same organizations. Otherwise, materiality is unchanged from last year.



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WHAT'S IN, WHAT'S OUT?

Below, we give some additional context for what we have identified as material and what we have determined not to be material. We will update our materiality for next year's report and continue to update materiality for all topics every three years.

Environmental Materiality Assessment	
What's In	Why?
<i>Energy Consumption and Carbon Emissions</i>	Our single largest impact is energy consumption and the carbon emissions associated with many forms of energy. This topic is also of great concern to our customers.
<i>Water Consumption and Risk</i>	Increased water stress is an expected consequence of climate change over the next decade in many regions where we operate, and data centers can have a high water risk exposure if dependent on water for cooling.
<i>Building Certifications</i>	In addition to constructing and operating efficient buildings, some stakeholders also value 3rd party certification of these building features (LEED, BREEAM, ENERGY STAR, Green Globes, etc.).
<i>Construction and Site Selection</i>	We have a responsibility to select sites for new facilities where environmental impacts can be minimized and to proactively manage impacts during construction, including recycling and circular economy strategies.
<i>Climate Risk Planning</i>	As a company that prizes resilience and uptime, it is important for us to anticipate and mitigate potential risks to our business from climate change
What's Out	Why?
<i>Procurement and Supply Chain</i>	Since we do not process a steady stream of raw materials the way a manufacturer would, we will not focus on supply-chain environmental impacts (other than electricity generation, which is represented above under Energy Consumption and Carbon Emissions). Supply-chain Social Responsibility issues are represented by the <i>Diverse Supply Chain</i> and <i>Health & Safety</i> topics.
<i>Solid Waste Generation</i>	Our facilities do not generate significant waste during operation other than lead-acid batteries, which we will continue to manage responsibly and evaluate for alternatives. Construction waste will be considered under <i>Construction and Site Selection</i> .
<i>Wastewater Generation</i>	With our strategy of utilizing water-consumption-free cooling designs, most of our facilities do not generate industrial wastewater in the same way that facilities with evaporative cooling do.

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Social Materiality Assessment	
What's In	Why?
<i>Diverse Representation</i>	Improving the diversity of our company (teammates, managers, executives, and Board) is our highest priority internal social issue.
<i>Diverse Supply Chain</i>	Since we are a relatively small company with only about 500 teammates, increasing the diversity of our supply chain offers an opportunity for greater social impact.
<i>Health and Safety</i>	The health and safety of our teammates and contractors are of high concern, especially with the risks inherent in the construction aspect of our business.
<i>Training, Education, and Benefits</i>	These factors contribute to our teammates' contributions to our work, as well as their overall well-being and quality of life.
<i>Community Investment and Engagement</i>	We have a responsibility to make a positive impact in the communities where we operate and to be a good neighbor.
What's Out	Why?
<i>Donations</i>	While we will continue our corporate giving programs, our REIT structure places limitations on our ability to donate in significant amounts, so our ability to make an impact is limited.
<i>Volunteering</i>	While we will continue to support our teammate volunteering programs, our relatively small headcount for a company of our revenue means that the total impact we can have through volunteering is limited.
Governance Materiality Assessment	
What's In	Why?
<i>Physical Security, Data Security, and Privacy</i>	It is critical that CyrusOne maintains secure facilities and protects our customers' infrastructure and data about our customers.
<i>Network Security</i>	We generally do not have logical access to – and our systems do not connect with – our colocation customers' IT equipment.* Rather, our colocation customers control and operate their own servers. For this reason, network security is primarily a concern for our headquarters and support functions, not our customers' server data.
<i>Business Code of Conduct</i>	Our code of business conduct and ethics requires ethical and equitable operations, which is very important to our stakeholders.
<i>Supplier Code of Conduct</i>	Our supplier code of conduct allows us to have a greater social impact by requiring ethical business practices in our supply chain.
<i>Board Diversity</i>	Our Board is committed to reflecting a diverse representation of skills, perspectives, and backgrounds (including with respect to race, ethnicity, national origin, gender, and sexual orientation).
<i>ESG Oversight</i>	Our Board and ESG committee have direct oversight of Environmental, Social, and Governance risk, strategy, practices, and policies through the mechanisms described under ESG Governance.
What's Out	Why?
<i>Ethics Training</i>	While we train on ethics annually and we see ethics training as a first step, we recognize that it is only part of an overall system of guidelines, resources, and checks and balances to support ethical behavior in our organization.

*The exception to this rule is our small, managed service business in a few data centers, which represents less than 2% of our annual gross revenue.

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OWNERSHIP AND OVERSIGHT

BOARD DIVERSITY

Our Board currently consists of eleven directors. As with CyrusOne's workforce, we prioritize the diversity of our Board – 18% of our directors are women and 27% identify as an ethnic/ racial minority, for a combined 36% diverse representation. The preceding information represents the state of the Board as of December 31, 2022.

EXECUTIVE COMPENSATION

The Board Compensation Committee is responsible for CyrusOne's executive compensation philosophy and policies, as well as the annual and long-term executive compensation program that flows from them. Our long-term success depends on our ability to attract, motivate, focus, and retain highly talented individuals who are committed to our vision and strategy. A key objective of our compensation programs is to create an ownership culture that aligns pay with performance and overall value creation.

SUSTAINABILITY-LINKED EXECUTIVE COMPENSATION

We use a combination of compensation programs to incentivize our executive officers to achieve growth and value creation over the short and long term. A portion of our compensation program is tied to the completion of sustainability initiatives including progress on renewables, water, biodiversity, recycling, safety, engagement, diversity & inclusion, and transparency. This collection of priority projects and metrics is intended to supplement and drive progress towards sustainability – an important area of interest for our stockholders.

FINANCIAL AUDIT

Since CyrusOne is now a privately held company, we no longer publicly disclose financial statements and SEC-related reports. However, this does not mean we do not continue to have strong financial oversight.

Management is responsible for the preparation of CyrusOne's financial statements and the financial reporting process. This process includes implementing, maintaining, assessing, and reporting on effective internal control over financial reporting. Our financial statements are subject to an independent review.

The Board's Audit and Risk Committee oversees the Company's financial reporting process on behalf of the Board of Managers.

The Audit and Risk Committee is responsible for the appointment, compensation, and oversight of our independent auditor and ensuring their independence by limiting non-audit services from the firm. In fulfilling its oversight responsibilities, the Audit and Risk Committee, management, and the auditor reviewed the audited financial statements for the year ended December 31, 2022, and reported to the Board of Managers. They also discussed the quality, not just the acceptability, of the accounting principles, the reasonableness of significant judgments, and the clarity of disclosures in the financial statements, and expressed an unqualified opinion on the Company's financial statements and internal controls.

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ETHICS

Our governance practices to promote ethical business conduct are focused on three different programs:

1. Teammate Ethics
2. Anti-Corruption
3. Antitrust

These programs, together, seek to avoid improper behavior or the appearance of improper behavior across our company.

CODE OF BUSINESS CONDUCT & ETHICS

We are committed to the highest ethical standards in the conduct of our business; therefore, the integrity of each teammate (employee), officer, and director is of paramount importance. All teammates, officers, and directors are accountable for their actions and must conduct themselves with the utmost integrity. As part of conducting business ethically, teammates, officers, and directors must conduct business in strict observance of all applicable federal, state, and local laws and regulations as set forth by those bodies that regulate the company's business and those that regulate public companies, such as the Securities and Exchange Commission. Persons who act unethically or violate the company's [Code of Business Conduct & Ethics](#) and supplementing written policies may be subject to disciplinary action, up to and including termination or removal, and, if applicable, referral to the appropriate authorities for prosecution. CyrusOne hosts annual training for our teammates regarding our Code of Business Conduct & Ethics and provides resources to support compliance.

We are committed to establishing and maintaining an effective process for teammates, officers, and directors to report – and for the company to respond to and correct – any type of misconduct or unethical behavior. Each employee, officer, and director has a duty to report any known or suspected violation of the Code of Business Conduct & Ethics, including any violation of the laws, rules, regulations, or policies that apply to the Company. We make it easy for our teammates to report any suspected violations, including raising the concern with their manager or with any member of the Human Resources department, the legal department, or the executive leadership team. We maintain additional methods for reporting concerns or seeking guidance about known or suspected violations of the Code of Business Conduct & Ethics or any applicable law or Company policy, including an Ethics & Compliance Helpline. The Helpline allows for confidential and anonymous reporting of concerns in the United States and elsewhere as permitted under local law. All reports of known or suspected violations are handled sensitively and with discretion. We also prohibit retaliation against an employee who, in good faith, seeks help or reports known or suspected violations.

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ANTI-CORRUPTION POLICY AND PROGRAM

Our anti-corruption and anti-bribery prohibition is simple – no teammate may:

1. Give or offer any payment, gift, hospitality or other benefit in the expectation that a business advantage will be received in return, or to reward any business received;
2. Accept any offer from a third party that you know or suspect is made with the expectation that we will provide a business advantage for them or anyone else;
3. Give or offer any payment (sometimes called a facilitation payment) to a government official in any country to facilitate or speed up a routine or necessary procedure; or
4. Threaten or retaliate against another person who has refused to offer or accept a bribe or who has raised concerns about possible bribery or corruption.

We maintain an Anti-Corruption and Anti-Bribery Policy and provide annual training which details the prohibitions and requirements for dealing with government officials, including employees of government agencies and state-owned entities. Due diligence must be conducted when hiring and doing business abroad with third-party agents, and any expenditures involving government officials must be pre-approved per the Anti-Corruption and Anti-Bribery Policy. Teammates who observe any “red flags” that indicate potential corruption must report them to the General Counsel or the Ethics & Compliance Helpline. CyrusOne is committed to complying with anti-corruption and anti-bribery laws wherever it does business.

ANTITRUST INCIDENT PREVENTION

Antitrust laws (also known as competition laws or fair-trade laws) of the US, the EU, and other countries are designed to protect consumers and competitors against unfair business practices and to promote and preserve competition. Our practice is to compete vigorously and ethically while complying with all antitrust, monopoly, competition, and cartel laws in all countries, states, and localities in which the Company conducts business. Our teammates are advised to exercise caution in meetings with competitors since any meeting with a competitor may give rise to competition law concerns. Thus, we require that our teammates obtain prior approval from the General Counsel if they need to meet with a competitor for any reason. The contents of the meeting should be fully documented. Whenever any doubt exists as to the legality of a particular action or arrangement, teammates are encouraged to contact the General Counsel. As of December 31, 2022, CyrusOne was not under investigation for any antitrust actions.

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TRANSPARENCY

ESG REPORTING

This is our fourth annual sustainability report, which is our primary method of reporting ESG topics. We treat transparency as our guiding principle in an attempt to honestly analyze our sustainability programs and report the areas that need improvement along with our successes. For instance, we promote the water-saving cooling we use at many facilities, hoping to inspire others in our industry to think seriously about water consumption. However, we also disclose the number of facilities in our portfolio that still consume large amounts of water.

We are methodical about both the content and structure of our report, which is designed to provide disclosure that is compatible with several third-party standards, as discussed in the [Introduction](#). To assist our customers with their environmental disclosure process, we also added sustainability profiles to the webpage for each of our [US-based facilities](#). These profiles include:

- Analysis of regional water stress and the facility's water use
- Regional grid greenhouse gas emissions factors and renewable percentages
- Any applicable certifications for the facility (ENERGY STAR, LEED, BREEAM, ISO, etc.)
- Other sustainability highlights particular to the facility

This year we have again pursued third-party assurance of our primary environmental and social data. The assurance statement can be found in [Appendix 4](#), and assured data is marked throughout the report with a red stamp.

We will continue this commitment to transparency in the coming years as we work toward our sustainability goals.

HIGHLIGHT
2022 Awards Roundup

We're proud of the progress our sustainability efforts have made over the past few years, and we're not the only ones who have noticed! In 2022 we received a variety of recognition for our sustainability advances and leadership.

Notably, our Vice President of Environmental Health, Safety, and Sustainability, Kyle Myers, was recognized as one of Environment+Energy Leader's "E+E Leader 50" as well as named a "Sustainability Hero of the Year" by the Business Intelligence Group.



Also, EcoVadis, the world's largest and most trusted provider of business sustainability ratings, ranked CyrusOne's sustainability efforts at the "Gold Level," which placed us in the 92nd percentile of more than 75,000 rated companies.



Other recognition we received in 2022:

- SEAL Business Sustainable Service Award
- Business Intelligence Group Sustainability Service of the Year Award
- Environment+Energy Leader Top Project of the Year Award
- Datacloud Global Awards Data Centre Sustainable Construction Award
- Salt River Project (SRP) Champion of Sustainability Award
- San Antonio Business Journal's Best Industrial Project Awards



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ADVOCACY

CyrusOne engages in the policy development process through direct advocacy efforts when appropriate. In addition, we participate in industry trade associations that represent the interests of the data center industry in geographic regions where we have operations. Our participation within trade associations provides an opportunity for the company's views to be represented in the policy priorities of the organizations of which we are members.

In addition to these groups, we also communicate our desire for renewable electricity to our power providers and seek opportunities to partner with them to greenlight new renewable projects, such as our partnership with Salt River Project, an Ariona power company, for a solar field that came online in 2021.

INDUSTRY GROUP MEMBERSHIPS

The Data Center Coalition (DCC) represents and advances the interests of the data center community and advocates for a strong business climate, policies, and investments that support the growth and success of this business sector. CyrusOne serves on the board of directors of the DCC.



The German Datacenter Association (GDA) represents its members—operators and owners of data centers of all sizes—in relation to laws, regulations, standards, norms and political issues. In the long term, the group seeks to sustainably improve the framework conditions for operating data centers in Germany.



The European Data Centre Association (EUDCA) developed the Climate Neutral Data Centre Pact (CNDCP), which creates binding terms for members to adopt a target to become climate neutral by 2030 with required annual reporting of progress. CyrusOne serves on the board of EUDCA and is a founding member of the Pact.



Established in 2014, Host In Ireland (HII) works to inform global decision-makers within the technology and data industries about Ireland's data hosting caliber and capabilities.



Infrastructure Masons (iMasons) was established to provide infrastructure executives and technical professionals an independent forum to connect, grow, and give back.



The Dutch Data Center Association (DDA) unites leading data centers in the Netherlands in a common mission: the strengthening of economic growth and the profiling of the data center sector to government, media, and society.



The Clean Energy Buyers Association is a community of over 330 energy customers and partners committed to achieving a 90% carbon-free US electricity system by 2030.



France Datacenter promotes the sector as a pillar of the digital economy with public authorities. The group disseminates best practices between professionals and promotes the reliability and performance of the sector in the media.



With over 800 members across the UK, techUK creates a network for innovation and collaboration across business, government, and stakeholders to provide a better future for people, society, the economy, and the planet.



Tech Titans® is a forum that connects the North Texas technology community to collaborate, share and inspire creative thinking that fuels tomorrow's innovations.



The Data Centre Trade Association (DCA) is a not-for-profit trade association comprising leaders and experts from across the data center sector.



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ENTERPRISE RISK MANAGEMENT

ROLE OF THE BOARD IN RISK OVERSIGHT

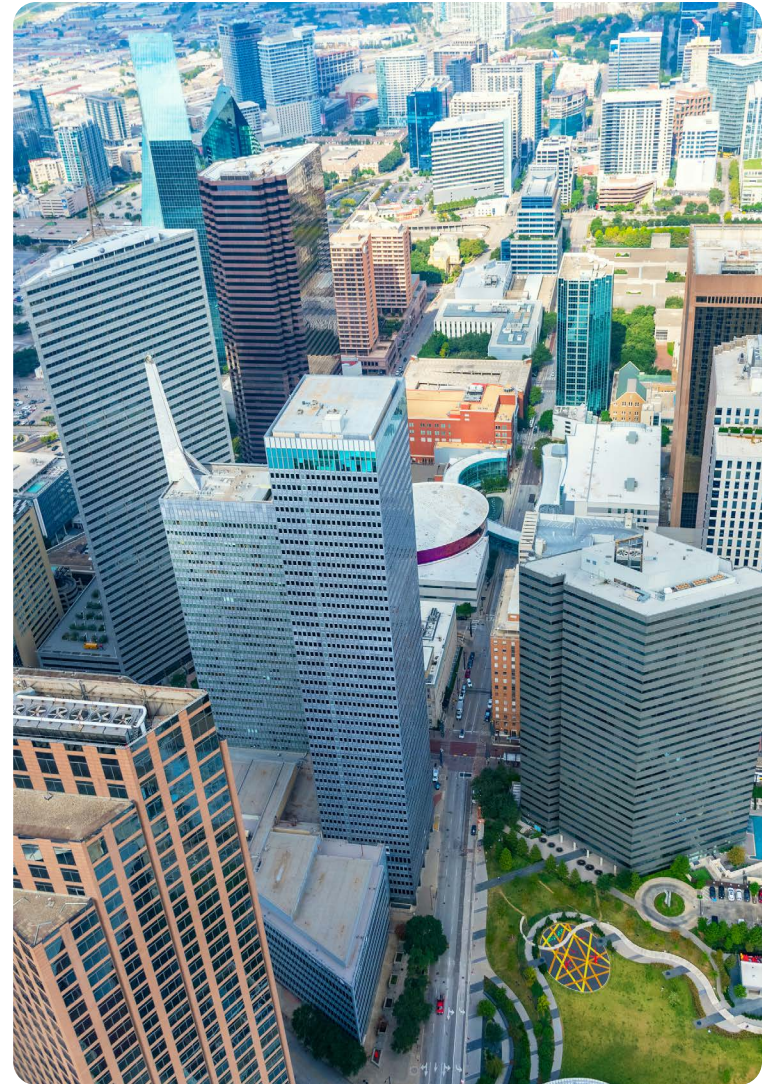
One of the key functions of the Board is oversight of our enterprise risk management process with support from standing committees of the Board, each of which is responsible for addressing risks specific to its respective areas of oversight.

The Audit and Risk Committee, particularly, has the responsibility to consider and discuss our major financial and regulatory risk exposures (including cybersecurity) and the steps Company management has taken to identify, manage and mitigate or investigate and remediate these exposures, including related policies and practices. The Audit and Risk Committee also reviews and evaluates the performance of our internal audit function, the system of internal controls, and the results of internal audits, as well as oversees and monitors compliance with the Company's policy on related party transactions, our executives' compliance with the company's Code of Business Conduct and Ethics, and the Company's Ethics and Compliance Program.

The Compensation Committee oversees the performance of our executive officers and assesses and seeks to align compensation with the company's strategic goals, including with respect to risks and opportunities.

The Investment, Strategy and Commercial Review Committee has the responsibility of overseeing the Company's investment policies and practices and considering certain risks associated with the Company's material capital allocation decisions and strategic investment or disposition decisions.

The ESG Committee is responsible for identifying, assessing, and monitoring ESG risks and opportunities that could affect the Company's business activities, reputation and performance or otherwise impact the long-term preservation and enhancement of shareholder value.



DATA PROTECTION AND INFORMATION SECURITY

CyrusOne recognizes the critical importance of data protection, information security, and privacy for our teammates, customers, and our business. Our commitments in this area are a foundational pillar of brand trust and, increasingly, a source of competitive advantage in an era of accelerated innovation, global data proliferation, and fast-changing regulatory frameworks.

We take a three-tiered approach to our program by: 1) Developing a comprehensive understanding of the landscape of data we must protect; 2) Employing multiple layers of protection; and 3) Establishing a hierarchy of controls to minimize exposure to risk from the outset whenever possible.

DATA PROTECTION

Having a holistic view of the data we must protect is just as important as putting measures in place to protect it. Our efforts break down into four major categories:

1. **Privacy of Our Customers and Teammates:** Our privacy policies and standards have been developed to keep personal data safe, to respect privacy, and to maintain the confidence of our customers, teammates, and partners at all levels. Our [Privacy Policy](#) describes our practices as well as the rights individuals have to request information about their personal information. We also have [policies and standards](#) to keep CyrusOne in good standing with the EU General Data Protection Regulation (GDPR). We provide training to ensure our teammates understand how to respect and protect privacy. Training topics include HIPAA Privacy and Security, Protecting Personal Information, Global Data Protection, and the ISO 27001 International Standard for Information Security Systems, among others.

2. **Operational Technology:** We protect the function of and data captured by the systems managing the operations of our data centers, such as our Building Management Systems and Emergency Power Systems.
3. **Business Data:** We protect the data generated during the course of normal business, such as personnel records, accounting and invoicing records, and sales information.
4. **Customer Server Data:** As mentioned in [Priorities and Materiality](#), we do not have logical access to customers' data that is housed in our data centers, save for our small managed service business in a few data centers, which represents less than 2% of our annual gross revenue. So our exposure to risk from customer data is very limited.

In 2022, we completed a comprehensive process to document the specific instances of personal private information we capture across the organization and how long that data is stored, including a comprehensive Data Protection Agreement and the EU Fair Processing Notice.

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INFORMATION SECURITY

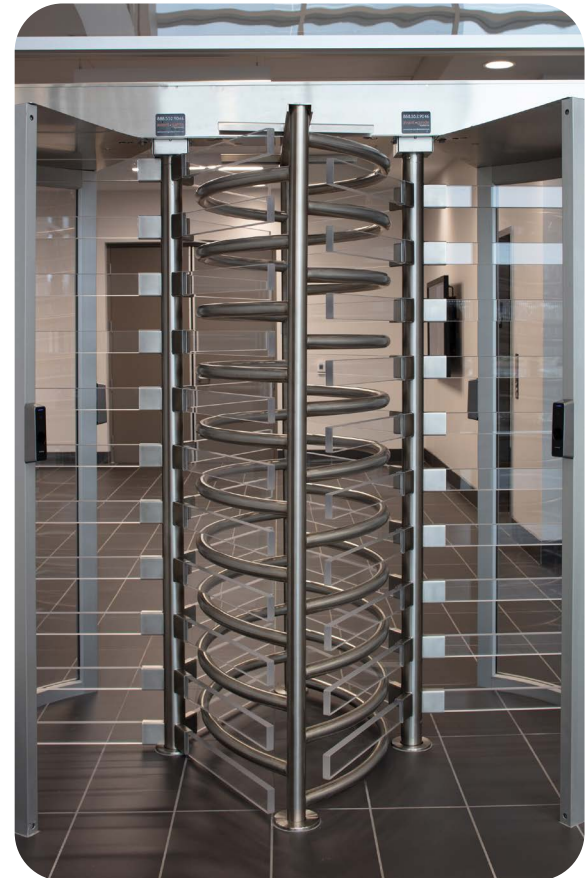
Information Security is defined as the protection of data and its critical elements, including the systems and hardware that store, process, and transmit that information. The physical security of our facilities, cybersecurity, and network security are important components of information security and guide our strategy.

PHYSICAL SECURITY

The protection of our facilities and physical assets is essential to maintain the trust and confidence of our customers. At CyrusOne, we employ various layers of security protocols at our data center facilities, including:

1. Facilities are surrounded by anti-scale, high-security fencing.
2. Outer perimeter areas, such as parking lots, are monitored with closed-circuit cameras.
3. The outside of buildings is monitored with closed-circuit cameras.
4. Lobby areas are guarded by security guards at all times, as well as monitored by closed-circuit cameras; dual authentication is required for access beyond all lobby areas.
5. The inner core of the facility is monitored by closed-circuit cameras and employs strict access controls.
6. Data halls are monitored by closed-circuit cameras and employ strict access controls.
7. Customers may customize security protocols for entrance to their cage.

In 2021 and 2022 we undertook significant steps to ensure consistency in our physical security standards across all of our facilities, both in the US and Europe. This included upgrading our Global Security Platform at almost all of our facilities, with only one left to upgrade in 2023. We have also implemented enhanced training programs for our teammates on topics such as Emergence Response Planning, Business Continuity Planning, Customer Service Standards and Expectations, and Safety Standards and Compliance. To learn more about the measures we take to ensure the physical security of our facilities, see our web page on [Physical Security](#).



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CYBERSECURITY

We have a Cybersecurity Program with a dedicated internal team coupled with specialized 24/7 security services partners. The team actively monitors and responds to potential threats. Our control framework is based on the NIST Cybersecurity Framework and enables us to manage cybersecurity-related risks. These controls have been designed to collectively ensure data confidentiality, integrity, and availability at CyrusOne. We also perform annual third-party audits including Penetration Testing and Vulnerability Analysis to benchmark our maturity, and our senior management team provides quarterly updates to the Audit and Risk Committee on cybersecurity.

In 2021 we engaged a third party to conduct a Cybersecurity Maturity Model Certification (CMMC) Assessment. Results from the Assessment showed CyrusOne maintains an overall well-defined, mature set of cybersecurity processes and practices, scoring at a high level for multiple domains, including asset management, incident response, media and physical protection, personnel protection, and risk management. In 2022 we continued the increase in assessments and proactive implementation of security controls and policies, identifying key areas of improvement that will be the focus of new legislation across Europe as the NIS 2 Directive has now been adopted by the Council of the European Union, setting objectives that all EU countries must reach and translate into their national legislation.

Teammates are key to the success of our cybersecurity strategy. All teammates and contractors undergo annual mandatory Information Security Awareness Training on how to identify and avoid potential security risks by keeping data, devices, and networks secure. In addition, we conduct continuous simulated phishing campaigns, as well as communication for awareness of social engineering tactics. This past year, we launched a new training program based on real-world attacks, designed to give teammates immediate feedback and training materials. We aim to provide protections across all our operations while continuing to build confidence with our customers, teammates, and partners.

NETWORK SECURITY

CyrusOne seeks to proactively reduce the risks to electronic information resources through the implementation of controls designed to detect and prevent errors before they occur. Detrimental access to the CyrusOne network is defined as any intervention, from either an internal or external entity, that creates any situation whereby authentication and access control mechanisms are bypassed that may compromise the confidentiality or integrity of information resources or render them unavailable. CyrusOne proactively reviews physical and logical risks to information assets and takes action to mitigate these identified risks.

HIERARCHY OF CONTROLS

When it comes to the protection of data and our physical technology assets, our belief is that we should minimize exposure to risk from the outset whenever possible. We have established a hierarchy of controls that help us minimize risk in four ways:

1. **Minimize Collection:** We limit the sensitive information we collect to what is necessary, such as customer data for billing, site access, or security purposes.
2. **Limit Retention:** We only retain the data that is necessary for our business operations.
3. **Protect Retained Data:** The data we do retain is protected with security measures described above, such as encrypted transmission of data to third parties and strict access controls.
4. **External Assurance:** Our facilities and operations are designed to comply with rigorous standards set by trade groups and certifying organizations. For more information, see our [Security Certifications and Audits web page](#).

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BUSINESS CONTINUITY

CyrusOne regards business continuity as a fundamental management priority and a core competency, as our business depends on providing customers with a highly reliable and resilient data center environment. We approach our business continuity planning in four main ways:

1. **Site selection:** We choose to build facilities in low-risk locations, design our buildings and systems for resilience, and build in redundancies where needed.
2. **Business Continuity Planning:** We develop Business Continuity Plans and Procedures for a range of event scenarios — as varied as natural disasters, power outages, or cyber-attacks — to ensure critical functions continue to operate in the face of a disruption or disaster. These plans are developed both at the companywide level and for each of our facilities. CyrusOne is ISO 22301 Certified and our planning adheres to ISO 22301 Business Continuity Framework standards.
3. **Testing and training:** We regularly run tabletop exercises and incident drills at our facilities and within our IT environments to ensure our teammates know what to do in different scenarios. In addition, we provide our teammates with annual training on various aspects of emergency response planning.
4. **Continual improvement:** Based on the outcomes of the drills and exercises we run with teammates, we make adjustments and improvements to our Emergency Action Plans when needed.

In the event that an emergency situation does occur, CyrusOne has an Event Management System and Emergency Response Protocols designed to protect the safety and security of our teammates, customers, and partners, and to minimize the risk to our business. We also prioritize customer communications at these times to ensure our customers are kept up-to-date on status and so they can activate their own business continuity planning, when needed.



New York Metro (NYM1)

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CLIMATE RISK

It is becoming more evident every year that companies must understand climate risk to achieve long-term success. No longer a far-off threat, the impacts of climate change are being felt worldwide in the form of increased storm intensity, devastating wildfires, and massive flooding. We cannot just continue "business as usual" and expect to prosper — instead, we must learn to predict and prepare for potential future conditions across a large range of scenarios.

At CyrusOne, we consider climate change in two ways. First, we evaluate how our activities impact the climate and contribute to climate change. We discuss these impacts and our ongoing efforts to reduce them in the [Climate Impact](#) section. Secondly, we think about how the changing climate might impact our business — in other words, our climate risk. We understand that even if we mitigate our climate impact by reducing carbon emissions to zero, we will still need to prepare for the potential effects of climate change on our business.

CyrusOne's approach to understanding and addressing climate risk is multi-faceted. Below are the most salient risks we have identified and how we are working to mitigate them.

RISK IDENTIFICATION

CyrusOne takes several approaches for identifying climate-related risks:

- **Enterprise Risk Assessment:** Climate issues raised in the annual enterprise risk assessment process are delegated to senior management for action, such as further investigation using our [Climate Risk Management Tools](#).
- **Stakeholder Engagement:** Issues raised by our stakeholders highlight emerging risks and opportunities that inform our overall climate risk management and reporting capabilities.
- **Climate Risk Investigations:** We contract with experts to perform initial climate risk evaluations on our behalf. These evaluations give us an idea of the scope of the issue as it applies to our operations. If the evaluation finds significant risk, we commission a full Climate Risk Assessment, such as the ones detailed in [Climate Risk Management Tools](#).
- **Industry Engagement:** We engage with our peers through industry associations like the Data Center Coalition and the European Data Center Association (EUDCA) to identify climate-related risks that are specific to our industry.



Dublin (DUB1) Wetland

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RISKS AND IMPACTS

We have identified five main climate risks, detailed below with their impacts.

TRANSITIONAL RISKS

REGULATORY RISK/BARRIERS TO OPERATE

Laws, regulations, or public perception may limit our ability to develop new facilities in a particular region or restrict areas in which we wish to operate. We address the risk of new barriers to operation by anticipating local impacts from climate change and limiting the related local impacts of our facilities by design. Limiting our facilities' water demand and improving wildlife habitat in the areas where we operate will allow us to demonstrate benefits to local communities. Our *Environmental Impact Assessments* and *Protected Areas Assessments* help us to avoid barriers by identifying sensitive lands that affect the local community and slow project development. Our *Water Risk Assessment* helps us to understand the regional water risk of an area during site selection so we can minimize our impact on local water supplies, which are anticipated to be reduced by climate change in many places. For more information, see the [Water](#) and [Biodiversity](#) sections. The UK Biodiversity Net Gain planning requirement is an example of our sustainability planning anticipating a new requirement. Our early efforts in biodiversity planning paved the way for additional responsible development in the London area.

COST TO OPERATE

Global climate change and the adaptations required to mitigate it can increase operating expenses in various ways. We performed a detailed *Carbon Pricing Assessment* to evaluate the impact of potential carbon price increases, such as national carbon taxes and customer internal carbon prices. Unsurprisingly, we learned that our highest risk from carbon price increases comes from increased costs for carbon-intensive electricity. This analysis helps to inform our drive to improve efficiency and acquire renewable energy for all facilities, and it gives us a way to prioritize regions where the carbon emissions from grid electricity are highest.

CUSTOMER PREFERENCE

It is important to consider not only how climate risk affects our business but also how it impacts our customers. As the business environment changes along with the climate, our customers' preferences and incentives are also adjusting, which can impact the competitiveness of our product offering. For example, our *Carbon Pricing Assessment* gave us increased insight into how our customers' internal carbon charges and carbon reduction goals might affect their purchasing decisions. As companies prioritize climate change mitigation strategies, they will be looking for business partners who can help them achieve these goals. Through a dedication to transparency, we help our customers understand how our services support their sustainability objectives. Through stakeholder engagement, our customers have also communicated an increased focus on water conservation in recent years, so our *Water Risk Assessment* and ongoing commitment to water-consumption-free cooling align us well with this customer preference.

PHYSICAL RISKS

WATER STRESS

Drought is one of the commonly predicted consequences of climate change. Increased water stress in areas where we operate may reduce our access to water for operations or increase friction with local communities. Facilities dependent on water for cooling may face operational interruptions or require costly retrofits to less water-intensive types of cooling.

To understand our exposure to water risk, we conduct an annual *Water Risk Assessment*, which is described in the [Water](#) section. We address the risk of increased water stress through our commitment to building new data centers that are not dependent on water for cooling. Furthermore, we have a target for our facilities in high water stress regions to become *net-positive* contributors of water to their local watersheds; this serves to reduce our exposure to water stress and improve the regions' water supplies. We believe that our aggressive stance on prioritizing water conservation will insulate us from significant risk of business disruption and Transitional Risks as water scarcity increases.

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FLOODING

Climate change is predicted to increase the likelihood of flooding due to excessive rainfall events and sea-level rise. Shifts in weather patterns have demonstrated that flood risk maps based solely on historical data do not accurately predict future flood risk. Sea-level rise from climate change is predicted to cause flooding in regions near coasts and increase the range of impacts from severe coastal weather events like hurricanes.

To understand this risk, we have conducted a *Future Flood Risk Assessment* using a variety of tools to consider the effects of different climate change projections on the flood risk at our facilities. This allows us to anticipate any additional risk in the future to existing facilities and develop mitigation strategies when needed. This is also an opportunity to use more complete information about future risks to select sites for new facilities.

OPPORTUNITIES AND IMPACTS

Given the almost unthinkable scale of the challenges and loss related to climate change, it seems callous to refer to it as an opportunity. Instead, we strive to manage risk and seek ways to grow our business ethically in the face of climate change and other environmental challenges by providing solutions to the problems and helping to shape our industry for the better.

Increased digitization of work and materials is one path toward decreasing our collective environmental and climate impacts. As virtual meetings replace air travel and cloud document storage replaces file cabinets, there are true benefits for the environment. Data centers like ours assist in this transformation. Our goal is to reduce our own environmental and climate impacts so we can contribute to the transformation without simply shifting the issues.

Our strategy for this transformation includes:

- **A transition to renewable electricity:** Like most data center operators, we recognize that our high electricity consumption is our primary climate impact and that the solution is to phase out the use of carbon-intensive electricity in favor of high-quality renewable options that are both *additional* and *regional*.

- **A focus on water conservation:** Unlike many in our industry, we strive to build data centers that do not rely on evaporating large amounts of water for cooling. Since climate change is likely to increase water scarcity in many places, this strategy will prevent us from contributing to water shortages in the communities and landscapes where we operate.
- **Innovation in backup generation:** To meet our *climate neutral* target, we will have to address our diesel-fueled backup generators. We are evaluating various potential strategies to maintain uptime during electricity outages without burning fuels that contribute to climate change.

We believe that, by building our business in a way that provides solutions to global problems, we will appeal to our customers by helping them to meet their own sustainability goals. In doing so, we will ethically grow our business in the face of this collective global challenge.

SCENARIO ANALYSIS AND RESILIENCE

Our tools use different climate scenarios to ensure that our strategy is resilient and adaptable to changing conditions. Overall, our targets are set to contribute to staying below 1.5°C warming and striving for the SSP1-1.9 scenario. When weighing climate risks, the specific scenarios considered in our tools include two climate scenarios (RCP4.5 and RCP8.5) and two socioeconomic scenarios (SSP2 and SSP3), based on CMIP6 models.

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MANAGING CLIMATE RISK

The management of climate risk requires Cross-functional Integration and Coordination organized by the Sustainability Working Group, which meets monthly to report on progress, assign responsibility for required actions, and request support from other groups. Group members discuss identified climate risks, related tools, and progress toward climate goals. The Sustainability Working Group reports to senior management who update the Board on climate risk management progress, which is then integrated into the Enterprise Risk Management process. Climate risks are represented both as primary risks (such as impacts from natural disasters) and as secondary contributions to other primary risks (such as competitive risks). For more detail, see the ESG Governance section.

CLIMATE RISK MANAGEMENT TOOLS

This section summarizes our inventory of climate risk management tools used to evaluate the risks identified above:

- Carbon Pricing Assessment: See below
Environmental Impact Assessments: See Biodiversity
Future Flood Risk Assessment: See below
Protected Areas Assessments: See Biodiversity
Water Risk Assessment: See Water

We know that there are additional strategies we can employ to further understand our exposure to climate risk, which we see as an important aspect of managing business risk. We will continue to expand our efforts to reduce exposure to climate risk in the future, investigating topics such as extreme heat and wildfire risk.

CARBON PRICING ASSESSMENT

We conducted a detailed Carbon Pricing Assessment, in which we compared multiple pricing scenarios and evaluated impacts to each of our facilities, taking into account the effects of different customer contract types, variations in the carbon intensity of electricity, and consumption of carbon-emitting fuels (diesel and natural gas). We also evaluated the potential impact of carbon price increases on new facility construction. We use this information to understand how carbon prices might

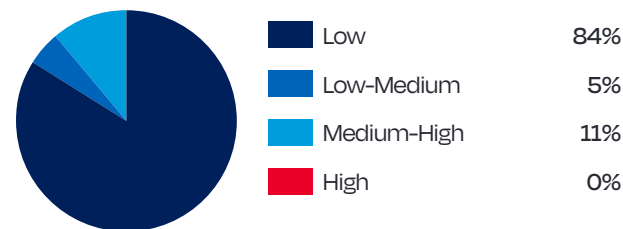
impact our business situation, as well as how it may affect our customer's priorities and requirements.

For more detail about this assessment see Appendix 1: Methodology.

FUTURE FLOOD RISK ASSESSMENT

According to government flood maps that rely on historical data (such as US FEMA or UK Environment Agency), we only have one facility with any exposure to flood risk. However, we understand that traditionally "flood-safe" areas may face increased flood risk due to climate change. We evaluated projections of future flood risk using a variety of tools, including the Flood Factor and UK Long Term Flood Risk tools, as well as other government-issued reports.

FUTURE FLOOD RISK ASSESSMENT



Using these tools, we found that over 80% of our facilities are located in areas that are expected to retain a low flood risk categorization over the next 30 years. For the remaining facilities that are projected to face increased flood risk, we can now evaluate targeted actions to make these facilities more resilient to this potential future flooding. We also use these future flood risk tools proactively to research and select new locations.

For more detail about this assessment see Appendix 1: Methodology.

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ENVIRONMENTAL IMPACT



OUR PHILOSOPHY

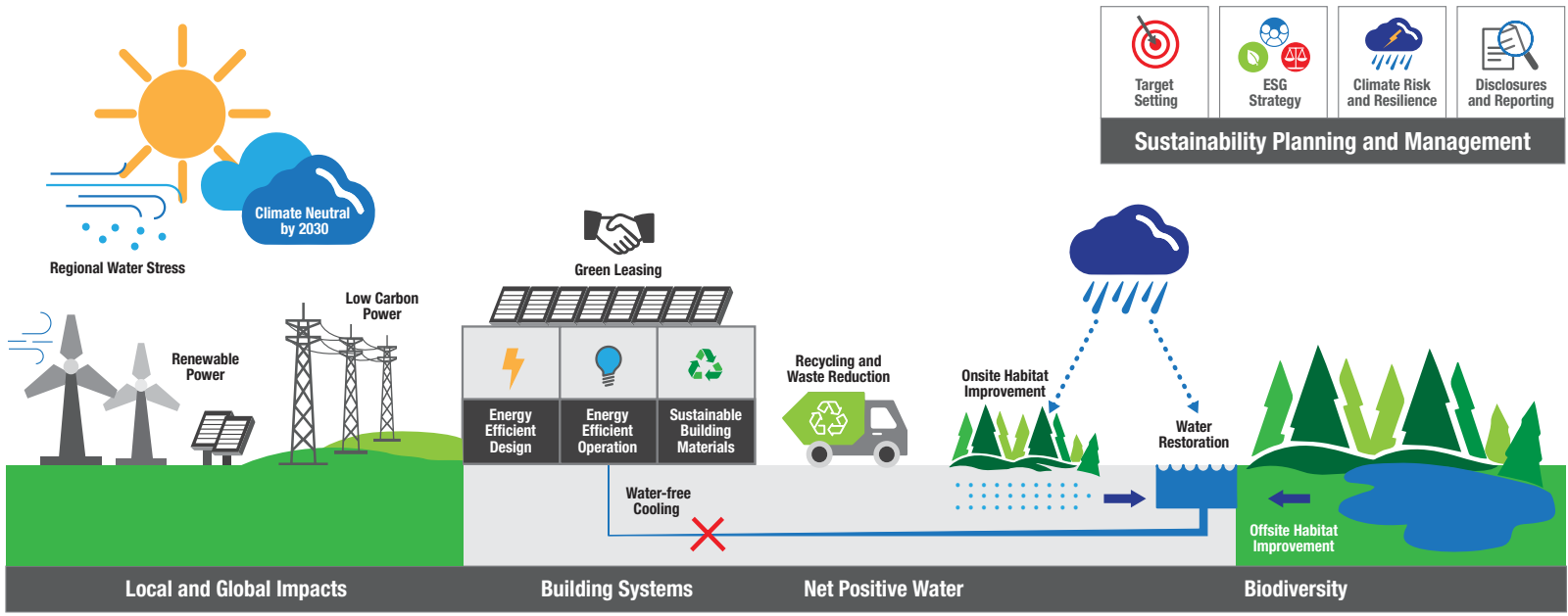
CyrusOne takes a holistic view of environmental impact. We are committed to reducing our carbon footprint and providing industry-competitive energy efficiency without sacrificing water or imposing negative impacts on biodiversity where we operate. Instead, we strive to make our impact on the environment a positive one through restoring water to watersheds in high-stress regions and improving habitats on or near our data center campuses in an attempt to do not only “less harm” but also to do “more good.”

BUILDING FOR SUSTAINABILITY

STRATEGY

At CyrusOne, we have long had a strategic focus on efficiency. We are known for building data centers quickly and effectively due to detailed planning and a standardized design. These same strengths lend themselves well to reducing environmental impacts. From site selection to cooling design to construction, efficiency is key to saving both time and resources. In this section, we will discuss our sustainability strategies for the first three stages of development: site selection, design, and construction. Our sustainability strategies and metrics for ongoing operations will be covered in the [Energy](#), [Water](#), and [Climate Impact](#) sections.

Sustainable Data Center Infrastructure



SITE SELECTION

RISK MANAGEMENT

When selecting sites for new data center construction, we use our climate risk assessment techniques to evaluate factors such as future flood risk and water stress (current and future). This provides insight into the chance of climate and weather-related impacts for each potential site and allows us to make more informed siting decisions. See the [Climate Risk](#) section for more information about our tools.

When looking for new data center locations, we prioritize sites in areas already designated for data centers or similar uses via zoning, or in existing planned developments like technology or business parks. This selection process, along with environmental impact assessments and protected areas assessments, gives us confidence that our facilities will not create negative impacts on prime wildlife habitats. By understanding sensitive habitats that are on or adjacent to our sites, we can anticipate and mitigate impacts during site selection. See the [Biodiversity](#) section for more information about our Environmental Impact Assessments and Protected Areas Assessments.

We also take into account the carbon emissions intensity of the local electricity grid and the local availability of renewable energy purchasing opportunities, prioritizing sites that support our *climate neutral* goal. For more information about how we prioritize renewable electricity opportunities, see [Energy Origination](#). As we advance our green building strategy, site selection takes on an expanded role for additional selection criteria such as development density, transportation options, parking capacity, habitat, and open space. By adding these criteria to the initial due diligence process, it helps us select sites for purchase that support our later design and construction ambitions.

DESIGN

During facility design, several tradeoffs and decisions need to be made. To help illustrate these important decisions, we highlight two significant distinctions in this section: 1) the tradeoffs that are made between energy and water consumption; and 2) the relationship between onsite water consumption and water consumption in the energy supply chain. Navigating these tradeoffs allows CyrusOne to take a multi-factor approach to reduce negative environmental impacts.

ENERGY/WATER TRADEOFFS

New CyrusOne data centers are designed to avoid dependence on water consumption-based cooling, providing increased reliability and reducing regional environmental impacts. Traditionally, data centers have utilized cooling systems that evaporate water, removing millions of gallons of water from the watershed and discharging wastewater with highly concentrated contaminants to the local treatment system.

Avoiding evaporative cooling results in a somewhat higher design PUE (Power Usage Effectiveness, a common metric used to measure data center efficiency) than could be achieved by “burning” water instead of electricity, but it allows us to prepare for the future and mitigate the impacts data centers have on regional water supplies. We do not ignore our carbon footprint — on the contrary, we are aggressively pursuing energy efficiency and low-carbon electricity. Our facilities are designed for a future where they will neither consume large amounts of water nor emit large amounts of carbon.

For more discussion of Energy/Water tradeoffs, [see our website](#).

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ONSITE WATER VS. ENERGY SUPPLY CHAIN WATER

We understand that no matter how much we reduce our onsite water consumption, as long as we are reliant on grid electricity, we are indirectly responsible for the consumption of large amounts of water through traditional thermoelectric electrical generation for the foreseeable future. We have begun efforts to quantify this energy supply chain water consumption in order to understand both our full impact on water resources and the risk of electrical supply disruption due to increased water stress. The water consumed in electricity production, sometimes referred to as the “embodied water of electricity” or “virtual water,” is often used to justify employing less expensive evaporative cooling to save electricity. The rationale is that water expended onsite is simply replacing water that would have been used in electrical generation and that it all evens out in the end. There is some truth in this hunch, especially when the electricity consumed comes from thermoelectric sources (like fossil fuel or nuclear generation). However, we know that solar and wind generation consume negligible amounts of water. As both electrical grids and individual consumers like CyrusOne replace thermoelectric sources with wind and solar generation, the water embodied in the electricity we consume decreases dramatically. If we can reach our *climate neutral* target solely through the use of renewable electricity, we will consume effectively no water for cooling at the vast majority of our facilities, whether directly through water-consuming cooling or indirectly through our electricity use.

We had the opportunity to perform a case study to test the theory that water used for evaporative cooling is made up for by water saved in the electricity generation process. The results, which contradict the conventional wisdom and reinforce our water-free cooling strategy, can be found [on our website](#).

To see the results of our supply chain water analysis, see [Metric: Total Water Usage Effectiveness \(WUE Source\)](#).

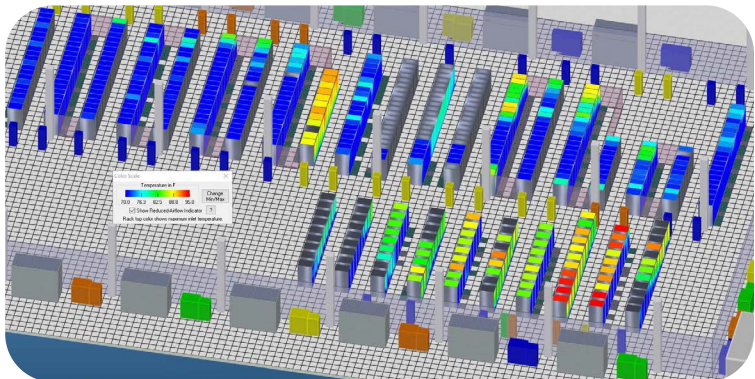
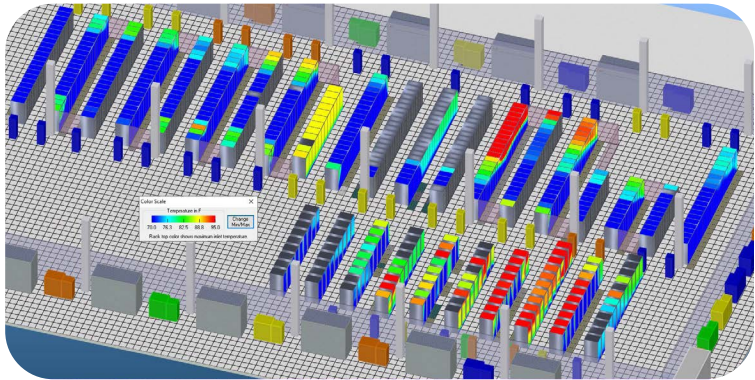
ENERGY EFFICIENCY

STRATEGY

We have mentioned the large amount of energy used by data centers, and our goal to reduce our dependence on fossil fuel-derived electricity with regional, additional renewable electricity. However, the first step is to decrease our environmental impact by increasing energy efficiency. Our standardized design incorporates efficiency at every level. The three primary design strategies we employ are:

1. Minimize data hall heat
2. Right cooling, right place, right time
3. Supplier partnerships

For more information on how we implement this strategy, see the [Energy Efficiency](#) page on our website.



METRICS AND TARGETS

Here are the primary metrics we use to measure our progress in designing efficient data centers. For more information about these metrics, see [Appendix 2: Primary Metrics](#).

TARGET: INDUSTRY-COMPETITIVE PUE WITHOUT CONSUMING WATER

Our target is for all newly built facilities to offer competitive energy efficiency without consuming water for cooling.

For more information about water-free cooling, see the [Water](#) section. For more information about how we operate efficiently and track PUE, see the [Energy](#) section.

METRIC: DESIGN PUE

Power Usage Effectiveness (PUE) is the ratio of a data centers' total electricity usage to the electricity delivered to IT equipment (such as servers). For more information about PUE, see [Appendix 2: Primary Metrics](#).

We make a distinction between a facility's Design PUE (the idealized PUE of a facility running at full capacity, based on its design and assumptions about customer IT equipment) and its Operating PUE (the measured PUE of a facility in a given year based on actual conditions). Operating PUE will always be higher (worse) than Design PUE because, to maintain redundancy and flexible capacity, colocation data centers rarely operate at full capacity. For more information about improvements in our Operating PUE, see [Energy](#).

Annualized Design PUE (Standard Design)				
Metric	Climate	2018	2021	2022
Low PUE	Cooler Climates	1.32	1.18	1.18
High PUE	Warmer Climates	1.36	1.28	1.28

Scope: Highest and lowest design PUE (kWh total/kWh servers) for locations where CyrusOne operates

Though we use a standardized design, the Design PUE varies at each facility due to the influence of the local climate; the warmer it is outside, the more energy it takes to maintain data hall temperatures. Therefore, we report the range of Design PUE across our facility locations. Since PUE varies by season, we report the annual average PUE ("annualized"). In 2020, we updated our standard design to incorporate higher-efficiency air-cooled chillers that take advantage of external air temperatures to enhance cooling efficiency (also called "economizers" or "free cooling"). While these systems provide increased efficiency everywhere, they give particular benefit to facilities in cooler climates, leading to a wider Design PUE range for our new design than for previous iterations.

Since PUE has a theoretical minimum of 1.0 (meaning no support energy used), our updated standard design reflects a 44% reduction in support energy in our cooler climates and a 22% reduction in warmer climates from our previous design.

TARGET: 100% WATER-FREE COOLING IN NEW DATA CENTERS

We have a target to build all new facilities with the ability to operate with zero water-consumption cooling. By committing to this strategy, these facilities can be efficient facilities cooled without the consumption of water both now and into the future.

METRIC: PERCENTAGE OF NEW DATA CENTERS WITH WATER-FREE COOLING

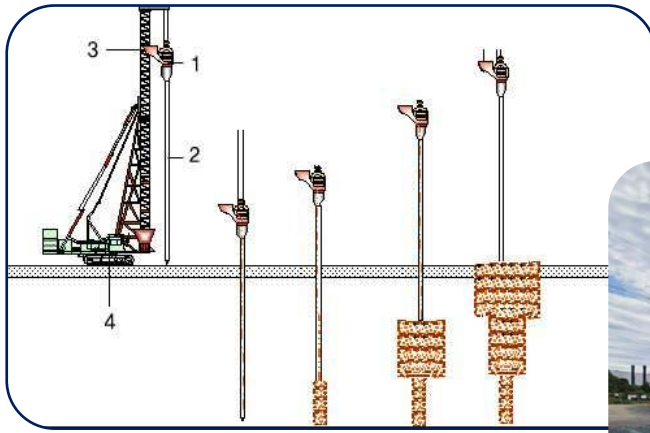
In 2022, we finished construction on Northern Virginia (NVA10), which was a water-free cooled facility.

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CONSTRUCTION
LIFECYCLE ASSESSMENT

To better understand the climate impact of data center construction as a portion of the facility's entire emissions, we performed a simple lifecycle assessment of our recently completed Council Bluffs, Iowa, and our upcoming Santa Clara, California, data centers. Compared to the United Nations Environmental Program (UNEP) finding that building construction accounted for 28% of global emissions from the building sector versus 72% from building operation, construction of our data centers accounts for approximately 1-2% of their lifetime total emissions. For more information on this, see the [Lifecycle Assessment](#) page on our website.

We recognize that as the electricity we use becomes greener, construction-related emissions will be a larger percentage of what's left, so we must also consider more sustainable construction materials and methods. For more details about this strategy, see [Circular Economy](#).



HIGHLIGHT
Alternatives to Construction Concrete

We are constantly evaluating methods of construction that help to achieve our sustainability aspirations and reduce the impact of our construction sites on the environment.

On our Frankfurt (FRA4) development we adopted a Variable Gravel Compaction Pile method to form the main piles, whereby a pile casing is driven into the ground and filled with gravel, which is then compacted as the casing is withdrawn. This allowed us to simultaneously accomplish sustainability objectives for both Carbon and Circular Economy.

We utilized a mix of materials retained from site clearance and imported recycled aggregates to achieve this, which considerably reduced the volume of concrete required to construct the building foundations and led to an associated reduction in embodied carbon at the beginning of the facility's lifecycle.

It also helped to overcome some general material availability and quality issues and simplified the site logistics, which provided the added benefit of accelerating the overall construction process. More efficient construction, low carbon materials, and recycled content are a potent combination!

GREEN BUILDING AND OPERATIONS CERTIFICATIONS

Until recently, we have pursued green building certifications on a case-by-case basis. We are evaluating a new green building standard and whether we will pursue certification for all new facilities or just build to that standard without third-party certification. The table below shows green building certifications that cover some or all of each building as of the end of 2022.

For all new facilities we design and construct in Europe, we are targeting BREEAM Very Good certification. This process is in progress for the following facilities:

- London (LON4 - 5)
- Frankfurt (FRA4 - 6)
- Dublin (DUB1)
- Madrid (MAD1)

Our new facility in Madrid is acting as a pilot development for BREEAM Spain and will become the first data center in Spain built under the BREEAM Data Centres International accreditation.

For all new facilities we design and construct in North America, we are evaluating the best certification strategy going forward.



ISO 14001 EMS Certified

- Amsterdam (AMS1)
- Frankfurt (FRA1)
- Frankfurt (FRA2)
- Frankfurt (FRA3)
- London (LON1)
- London (LON2)
- London (LON3)

ISO 50001 EnMS Certified

- Frankfurt (FRA1)
- Frankfurt (FRA2)
- Frankfurt (FRA3)

ISO 45001 OHSMS Certified

- Amsterdam (AMS1)
- Frankfurt (FRA1)
- Frankfurt (FRA2)
- Frankfurt (FRA3)
- London (LON1)
- London (LON2)
- London (LON3)



Green Globe - 3 Globes

- Chicago (CHI1)
- Chicago (CHI2)

Green Globe - 1 Globe

- Phoenix (PHX7)



BREEAM - Very Good

- London (LON2)



ENERGY STAR Certified

- Phoenix (PHX1) 2019
- Phoenix (PHX2) 2020
- Phoenix (PHX3) 2021
- Phoenix (PHX5) 2021
- Phoenix (PHX6) 2021



LEED Gold

- New York (NYM1)



NWF Certified Wildlife Habitat

- Dallas (DFW3)

ENERGY

By nature, data centers require a large amount of energy. They must remain fully operational 24/7 and run IT equipment that draws large amounts of power. Furthermore, these systems generate a large amount of heat, requiring energy to keep them cool. This is why energy issues are typically seen as the primary environmental concern for data centers. Our main source of energy is electricity, though we also use diesel for backup generation, and some facilities use small amounts of natural gas for comfort heating. For the most part, we focus on electricity because it provides the vast majority of our energy. This section focuses on energy origination and ongoing energy efficiency. For more information about how new facilities are designed to be energy efficient see [Building for Sustainability](#). For more information about the carbon emitted due to energy use, see [Climate Impact](#).

STRATEGY

Our approach to reducing our environmental impact through energy falls under three main strategies: (1) Our standard design for new data centers incorporates many energy efficiency measures. We review best practices in the industry, partner with suppliers, and take innovative approaches in design and construction to achieve cost-effective efficiency. (2) For existing facilities, we strive to reduce energy and carbon emissions through smart operational practices and facility upgrades. (3) Through strategic site selection and energy origination, we can increase renewable and low-carbon power sources for our operations.

A key part of our strategy is to integrate water and energy metrics to give a more complete picture of our efficiency. As described in [Building for Sustainability](#), water use is usually “invisible” to energy calculations like PUE, frequently leading to the tradeoff of decreased energy use for increased water consumption. However, we know that water consumption can have huge regional environmental impacts. By reporting energy metrics that reference water use, we are charting a new course in our industry for increased transparency and hope that others follow suit.

ENERGY EFFICIENCY

Along with facility design and construction, we also strive to reduce energy consumption after the commissioning of new facilities and within operations of our existing facilities.

STRATEGY

We focus on operating all facilities efficiently through the use of building management systems, airflow modeling, and carefully balancing cooling delivery with server needs. We work with customers to offer rack blanking panels, advise on cold aisle containment, and properly size airflow floor tiles to get the most utility from the chilled air that we supply to data halls. We also partner with our suppliers to identify new high-efficiency technologies and customize equipment specs to meet our particular needs.

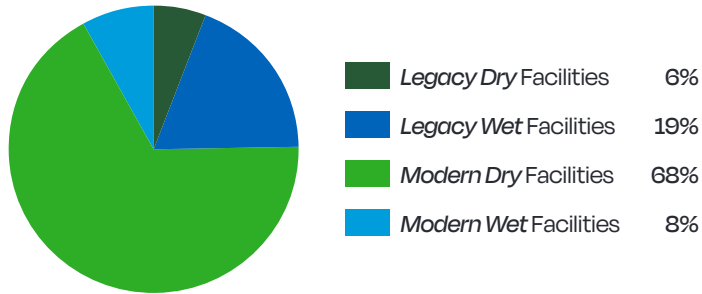
To get the most efficiency gains for our efforts, we first look for ways to retrofit and upgrade equipment at our least efficient facilities. To inform our decisions about where to invest in upgrades, we also consider the carbon intensity of the local grid to achieve the biggest carbon reduction for our investment. We also favor opportunities to achieve both energy efficiency and reliability improvements with the same project.

Within our strategy, there are two key distinctions we make in our portfolio: 1) whether the facility is a *legacy* build or a *modern* design, and 2) whether the facility consumes water for cooling (“*wet*”) or not (“*dry*”). For a full explanation of facility designations (*legacy, modern, wet, dry*) see [Appendix 2: Primary Metrics](#).

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DATA CENTER PORTFOLIO COMPOSITION

This chart summarizes the composition of our data center portfolio. The percentage is based on the total available colocation square footage at directly managed *built-out* facilities. "*Built-out*" means that a customer has not only rented the space, but has also installed their servers and begun to draw significant power. We have water data coverage for 92% of our directly managed, open, and *built-out* building area.



COMPUTATIONAL FLUID DYNAMICS (CFD) OPTIMIZATION

We use Computational Fluid Dynamics (CFD) modeling to simulate the flow of chilled air throughout a facility. CFD Models are advanced mathematical simulations that require expert modeling of the space and hours of high-performance computing to complete, but give key insights into how air and heat move through our facilities. Unlike in-house data centers, colocation data centers have a split responsibility between the servers (controlled by the customers) and the cooling systems (controlled by CyrusOne). Coordinating these two efforts for energy efficiency is not a simple matter. By using CFD modeling we can partner with customers to recommend optimal settings for our cooling equipment and customer server arrangements to ensure that both operate efficiently.

We perform CFD Modeling to customize the cooling of each data hall at various stages of the data center lifecycle:

1. Between construction and operation
2. During customer build-out
3. For ongoing optimization

For more details on our CFD optimization process, see the [Computational Fluid Dynamics](#) page on our website.

RISK MANAGEMENT

Energy efficiency reduces our environmental impact and also provides resilience against some types of risk. By reducing our reliance on energy, we also reduce the strain we place on the grid and the resulting risk of grid power interruptions, as well as our exposure to price volatility. Additionally, having efficient operations allows us to minimize regulatory risk, such as preempting costly adaptation measures with energy-efficient programs in place to meet more stringent regulations in the future.

METRICS AND TARGETS

Below are the primary metrics we use to measure our progress on energy-efficient operations. For more information about these metrics, see [Appendix 2: Primary Metrics](#).

METRIC: ABSOLUTE ENERGY CONSUMPTION

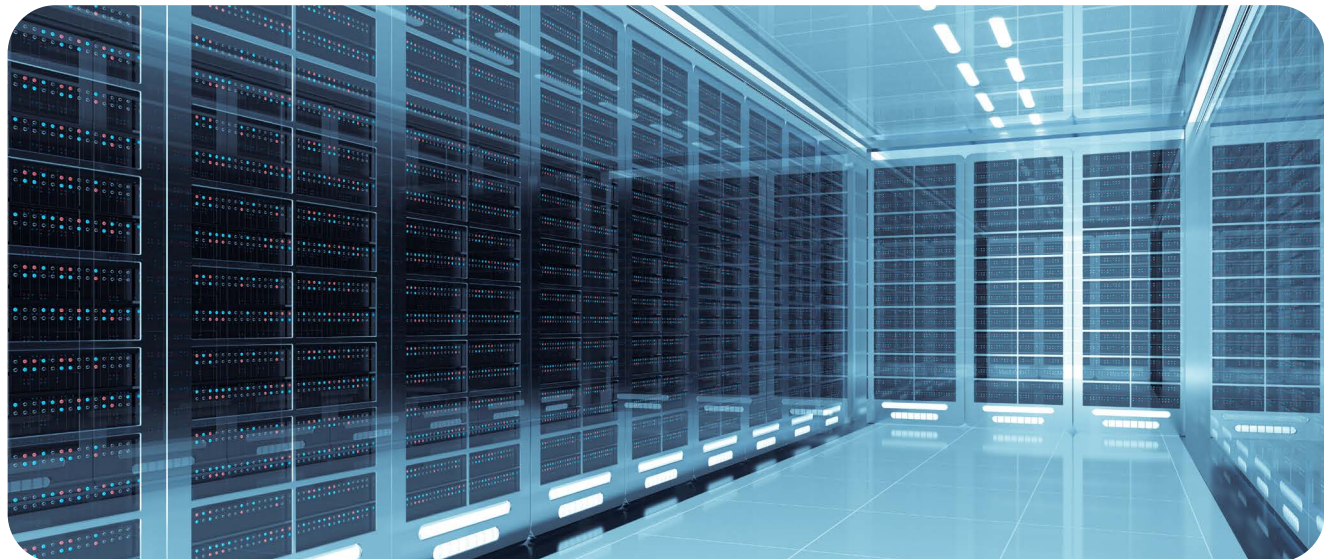
Our operational energy use calculations include four sources:

1. **CyrusOne electricity** for server support and common areas
2. **Customer electricity** for their equipment in our data halls
3. **Natural gas** for comfort heating (only used at some facilities)
4. **Diesel** for emergency backup generation.

These data are combined into a common unit for aggregation (MWh). We use standard conversion factors for natural gas and diesel (from the European Framework Initiative for Energy & Environmental Efficiency in the ICT Sector). For more detail about the scope and methods, see Energy Inventory in [Appendix 1: Methodology](#).

Total Energy Consumption (MWh-equivalent)			
Energy Type	2018	2021	2022
Non-renewable fuels purchased and consumed	18,683	52,265	29,934
Non-renewable electricity purchased	1,362,862	1,508,179	1,630,480
Steam/heating/cooling and other energy (non-renewable) purchased	0	0	0
Total renewable energy purchased or generated	296,950	1,509,358	1,721,535
Total non-renewable energy sold	0	0	0

Scope includes: **CyrusOne electricity** for IT equipment support and common areas; **Customer electricity** for their IT equipment in our data halls; **Natural gas** for comfort heating (only used at some facilities); and **Diesel** for emergency backup generation.



ENERGY INTENSITY METRICS

We measure energy intensity from two different perspectives:

- **Power Usage Effectiveness (PUE):** The ratio of total electricity to the electricity delivered to IT Equipment. Measured both as Design PUE and Operating PUE.
- **Building Energy Intensity:** The energy per *built-out* colocation floor area in our facilities measured in megawatt-hours per square foot (MWh/ft²). This includes energy from diesel and natural gas as well.

Each of these metrics gives us a different perspective on how we're doing on reducing the energy intensity of our operations. They are detailed below.

POWER USAGE EFFECTIVENESS (PUE)

Power Usage Effectiveness (PUE) is the ratio of a data center's total electricity usage to the electricity delivered to IT Equipment. This extra, non-IT power (anything in excess of a PUE of 1.0) is used to operate the cooling, lighting, and other mechanical systems necessary for IT equipment operation. Since CyrusOne doesn't make any decisions about the efficiency of the IT equipment itself, we focus on how efficiently we can support their cooling and power distribution needs. For more information about PUE see [Appendix 2: Primary Metrics](#).

We make a distinction between a facility's Design PUE (the idealized PUE of a facility running at full capacity, based on its design and assumptions about customer equipment) and its Operating PUE (the measured PUE of a facility in a given year based on actual conditions). Operating PUE will always be higher than Design PUE because, to maintain redundancy and flexible capacity, colocation data centers are never run at full capacity. For more information about improvements in our Design PUE, see [Building for Sustainability](#).

METRIC: OPERATING POWER USAGE EFFECTIVENESS (PUE)

Below are our Operating PUE metrics for 2018 (baseline) and 2021-2022 for the different facility categories we track. These averages only include *built-out* data centers that have finished their commissioning, start-up, and initial customer installations. *Pre-built-out* facilities, those under development, and those for which data is unavailable are not included in the PUE averages. PUE has a minimum ideal score of 1.00 (meaning that no power is used to cool or light the facility), and a lower score indicates greater efficiency.

While we expect some year-to-year variability due to weather and occupancy, we have shown an improvement in PUE across all categories except legacy dry facilities. This is due to energy efficiency activities as well as some newer facilities that were newly built and previously underutilized being filled out with customer installations (increasing the IT equipment electricity denominator).

Average Operating PUE				
Reporting Category	% by ft ²	2018	2021	2022
Legacy Dry Facilities	6%	1.59	1.57	1.58
Legacy Wet Facilities	19%	1.65	1.64	1.63
Modern Dry Facilities	68%	1.48	1.45	1.42
Modern Wet Facilities	8%	1.48	1.37	1.36
All Facilities	100%	1.53	1.47	1.45

Scope: Includes facilities that are built-out and directly managed by CyrusOne.

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METRIC: BUILDING ENERGY INTENSITY

Energy intensity describes the energy use per built-out colocation building area in our facilities. Energy intensity is measured in megawatt-hours per square foot (MWh/ft²). This includes energy from diesel and natural gas as well.

Energy intensity only includes in-scope energy and building area from data hall space that is built-out and directly managed. It is calculated as a ratio of total energy use (including fuels and electricity supplied to customer IT equipment) to built-out colocation area. A lower energy intensity indicates greater efficiency. For more information about Energy Intensity see Appendix 2: Primary Metrics.

Energy Intensity increased from 2018 to 2022 in our modern facilities. This increase is due to the change in the industry toward high-performance computing and newer facilities that have not finished customer build-outs, increasing the energy density of actual IT equipment use.

Building Energy Intensity (MWh/ft²)				
Reporting Category	% by ft²	2018	2021	2022
Legacy Dry Facilities	6%	0.81	1.06	0.65
Legacy Wet Facilities	19%	0.60	0.65	0.60
Modern Dry Facilities	68%	0.65	0.84	0.91
Modern Wet Facilities	8%	0.77	1.22	1.27
All Facilities	100%	0.65	0.84	0.87

Scope: Includes facilities that are built-out and directly managed by CyrusOne.

HIGHLIGHT

The Sound of Efficiency

Three of our legacy facilities in the New York Metro region recently received upgrades to ultrasonic humidification, resulting in significant energy savings. The old infrared humidification systems used extremely hot bulbs or electric elements to evaporate water to add to the facility's air stream to maintain proper conditions for our customers. Instead of evaporation, ultrasonic humidifiers use vibration to create mist – a much more energy efficient process. Our new systems require only 10 kW of energy per pound of humidification, while the old system used 284 kW per pound. The combined energy savings for the three facilities add up to over 2,700 MWh annually.



ACHIEVEMENT UNLOCKED

In 2022, we performed various energy efficiency upgrades at existing facilities, including tile optimization, humidification system upgrades, UPS upgrades, and LED retrofits. Combined, these projects will save us approximately 14,000 MWh each year!

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ENERGY ORIGINATION

The sources from which we originate or procure energy have a big impact on our energy and carbon goals, as well as our total water impact. This section describes our efforts toward “green” energy origination.

STRATEGY

Our renewable electricity strategy primarily serves to meet our *climate neutral* target, though it also provides additional benefits. First, it allows us to help our customers meet their supply chain carbon reduction goals. Next, by “locking in” renewable contracts instead of relying exclusively on unbundled RECs, we may reduce our exposure to energy price volatility and maintain our ability to offer competitive rates. Finally, as we mentioned in [Onsite Water vs. Energy Supply Chain Water](#), solar and wind energy do not consume the large quantities of water that thermoelectric power (fossil fuels and nuclear) does, thus allowing us to further reduce our impact on regional water supplies.

Renewable electricity procurement is the biggest part of meeting our *climate neutral* goal because we defined our target to include the emissions from electricity supplied to customer equipment. Lowering our energy demand with efficiency measures only affects our support equipment, and even there, efficiency alone won’t get us to *climate neutral*. To help us consider the effect of renewables on carbon emissions, we also monitor the relative carbon intensity of different grids where we operate to understand the carbon reduction per MWh from switching to renewables. Finally, our transition to renewable electricity is a key strategy in managing risks in our energy supply chain and climate risks, like carbon pricing risk and water scarcity risk. These are discussed below in [Risk Management](#).

In articulating our Energy Origination Strategy, we think about it on two different levels:

1. **Origination Hierarchy:** The types of power in order of preference
2. **Transition Roadmap:** How we plan to transition to a renewable electricity future



Dallas (DFW3) - Powered by renewable electricity from a Central Texas solar plant

ORIGINATION HIERARCHY

In addition to considerations of cost and reliability, we follow a carbon free and renewable electricity procurement hierarchy to guide our energy planning and purchases (see table below). We screen all of our energy purchases, giving preferences for generation sources that do no significant harm. Beyond that aspect, we strive to support renewable electricity generation projects that are *additional* (the project would not have happened otherwise), *regional* (contributing to the same grid where the energy is used), and *bundled* (where delivery of power remains “bundled” to renewable energy certificates).

Therefore, direct renewable power with additionality via a physical power purchase agreement (PPA) is the most desirable procurement option. Next most desirable is a Green Tariff associated with additional new renewable projects, particularly when bundled with regulated utility power supply. Where PPA’s or Green Tariffs are not available, we consider virtual power purchase agreements (VPPA) with a preference for contracts on the same grid as our demand.

Lastly, we may utilize Renewable Energy Certificates (RECs), Guarantees of Origin (GO), Renewable Energy Guarantees of Origin (ReGO), or Emission Free Energy Certificates (EFECs) as a “bridge.” For example, the time between when we sign a new PPA and when the project finishes construction and begins delivering renewable power might be 1-3 years. In such cases, we may use unbundled RECs to “bridge” the time between signing and delivery. We may also acquire RECs when requested by customers.

We do not intend to achieve carbon neutrality solely with unbundled RECs; instead, we consider them to be an incremental mechanism. Unfortunately, because of the density of power data centers demand, onsite renewable generation alone cannot meet the needs of our facilities.

Carbon Free / Renewable Electricity Origination Hierarchy					
Desirability	Origination Type/ Instrument	Additionality	Regionality	Bundled	No Significant Harm
Most Desirable	PPA/Retail Block	✓	✓	✓	✓
	Green Tariff	✓	✓	✓	✓
	VPPA (same region)	✓	✓		✓
	VPPA (different region)	✓			✓
	RECs/GOs (grid specific)		✓		✓
Least Desirable	RECs/GOs (national)				✓
	EFECs				✓

TRANSITION ROADMAP

In the development of new facilities, we evaluate and source renewable electricity with the goal of beginning operation with renewable electricity on day one. Many of our long-term power contracts at existing facilities were signed before the emergence of our *climate neutral* ambitions, and we must wait for existing contracts to expire before evaluating new options. We have already achieved 100% renewable electricity in Europe and plan to continue on our roadmap to *climate neutrality*. Our priority roadmap for renewable electricity procurement across our existing facilities is:

1. Europe, prioritizing additional physical PPAs
2. Deregulated US power markets, prioritizing larger loads first
3. Regulated US markets with green power options
4. Regulated US markets without ready green power options

By prioritizing our transition to renewable electricity in this way, we aim to make the most progress in the least time. Hopefully, the US markets currently without ready green power options will develop them as we finish the first three phases. In the shorter term, we will need to work with less desirable energy origination tools in these markets. Longer term, in regulated US power markets, we will work with our utility partners to develop green tariff offerings.

RISK MANAGEMENT

Switching to renewable power can reduce both financial and physical risks. By lowering the carbon footprint of our power supply, we reduce our exposure to impacts from a potential carbon tax. (For information about the potential impact of Carbon Pricing Risk on electricity prices, see [Climate Risk](#).) Signing long-term energy purchase agreements allows us to avoid energy price volatility and maintain our rates during severe weather events that influence market prices. Renewable electricity generation is also less water-intensive and therefore results in a reduction of energy supply chain water consumption. We operate in some regions of high water stress where reductions in water use across our operations, including power generation, are necessary (for more information on our Water Risk Assessment see [Water](#)).

METRICS AND TARGETS

Most of our energy origination metric performance is represented in the *climate neutral* target and the metrics we use to evaluate it (see [Climate Impact](#)). By switching to less carbon-intensive electricity providers, energy origination contributes to overall carbon reductions. There are a few metrics specific to renewable electricity that we track for insight into our current performance for customers and other stakeholders. For more information about these metrics, see [Appendix 2: Primary Metrics](#).

TARGET: 100% RENEWABLE ELECTRICITY IN EUROPE

The first step on our Transition Roadmap was to shift our European operations to 100% renewable electricity. As of the end of 2020, we had achieved 100% renewable power for our facilities in London, Dublin, and Amsterdam, leaving only our Frankfurt facilities operating on non-renewable power. We were able to complete this transition with the first delivery of renewable power to our Frankfurt facilities in June 2021. This means that CyrusOne met its *climate neutral* commitments to the *Climate Neutral Data Centre Pact* 8 years ahead of schedule (with 2022 being the first full calendar year of *climate neutral* operation). Furthermore, this target paved the way for our new Amsterdam facility to run on renewable electricity from day one. While other facilities have switched to renewables after operation, Amsterdam is the first CyrusOne facility to have never operated on traditional power.

METRIC: PERCENTAGE OF ELECTRICITY PROCURED AS RENEWABLE

We measure the amount of energy that we originate as 100% renewable, as a percentage of all the electricity that we purchase (including electricity delivered to customers). In 2022, expanded renewable electricity in Europe and North Texas raised our renewable percentage to 17.4% of total CyrusOne electricity procured. This was a significant improvement over the 0.6% renewable electricity across our portfolio in 2018.

ACHIEVEMENT UNLOCKED

As of 2022, we have achieved 100% renewable electricity in Europe!


METRIC: PERCENTAGE OF ELECTRICITY PROCURED AS RENEWABLE BY CUSTOMERS

We also measure the renewable electricity that we can confirm has been procured by our customers to cover their server and cooling electricity in our facilities (which we include in our Scope 2 reporting) as a percentage of all the electricity that we purchase.

METRIC: PERCENTAGE OF ELECTRICITY PAIRED WITH RENEWABLE CERTIFICATES

We also measure the amount of energy that we pair with unbundled Renewable Energy Certificates (RECs), Guarantees of Origin (GOs), or other certificate mechanisms. We do not currently employ any certificate measures, but plan to clearly communicate if we begin using them. As mentioned under [Origination Hierarchy](#), we do not expect to consider unbundled certificates as a long-term part of our strategy to meet our *climate neutral* target.

As renewables contracts signed in previous years start delivering power, our CyrusOne-Procured Renewable percentage continues to increase. With customer-procured renewables remaining stable this has resulted in a net increase in the total renewable electricity supporting our facilities.



Procured Renewable Electricity			
Renewable Type	2018	2021	2022
CyrusOne-Procured Renewables	0.6%	15.3%	17.4%
Customer-Procured Renewables	17.3%	34.7%	34.0%
Renewable Certificate Procurement	0%	0%	0%
Total Renewables	17.9%	50.0%	51.4%

Scope includes: **CyrusOne electricity** for server support and common areas; **Customer electricity** for their servers in our data halls.

RENEWABLES OUTLOOK

During 2022, we executed additional physical renewable power purchases in Texas from a new solar project, which will deliver approximately 76,000 MWh of additional renewable solar power per year, expected to start delivery in 2024. Also during 2022, we executed additional physical renewable power purchases in Texas from a new wind power project, which will deliver approximately 33,500 MWh of additional renewable wind power per year into the power supply portfolio serving our sites, expected to start delivery in 2023.

METRIC: PERCENTAGE OF FACILITIES WITH RENEWABLE OPTION

Currently, 100% of our facilities can offer customers some form of renewable electricity as an upgrade.



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CLIMATE IMPACT

As a responsible corporate citizen, CyrusOne recognizes the importance of reducing our carbon footprint to contribute to global efforts to mitigate climate change and its associated risks. Consequently, we have taken several actions to address our climate impact from energy use and its associated carbon emissions.

To understand our climate impacts, we prepare an annual greenhouse gas inventory using the standards set by the World Resource Institute Greenhouse Gas Protocol (WRI GHGP). For details about the scope of our inventory, please see [Appendix 1: Methodology](#).

STRATEGY

Our climate impact strategy is guided by two goals: (1) reduce our carbon footprint, and (2) provide useful business insight to our operations, customers, and other stakeholders.

To reduce our carbon footprint, we first focus on reducing energy consumption (see [Building for Sustainability](#) and [Energy Efficiency](#)). Second, we look for lower-carbon energy options such as directly procured renewables. Finally, we consider limited use of offset mechanisms like Renewable Energy Certificates (RECs) and carbon offsets (see [Energy Origination](#)).

Our purpose in preparing our greenhouse gas inventory is to meet stakeholder information needs while informing internal decisions. We do this by [Meeting Third-Party Standards](#) set forth by WRI, GRI, SASB, TCFD, and CDP Climate. By providing transparency about our impacts, we support our stakeholders' goals and decision making.

The high-quality carbon emissions data from our greenhouse gas inventory also informs internal strategic decisions across the company, helping us to avoid emissions by design. These assessments are detailed in the following Risk Management section.

We provide clear carbon emissions data to current and prospective customers to help them make informed decisions about reducing their emissions through our facility-specific Sustainability Profiles in the [Locations](#) section of our website.

RISK MANAGEMENT

We assess our direct and indirect carbon emissions to manage risk and inform our carbon reduction strategy. This involves tracking regional and national grid emissions factors to understand how carbon intensity varies across our facilities based on the fuel composition of each electrical grid. We also seek out supplier-specific emission factors for even greater accuracy. Energy consumption makes up nearly all of our carbon footprint.

We manage climate impact (how we affect the climate) separately from climate risk (how the climate affects us). To find out more about our strategies toward managing the effect climate change has on our business, please see the [Climate Risk](#) section.

Currently, our greenhouse gas data covers 99.6% of our colocation capacity. The missing 0.4% is due to a lack of data from two small, leased *legacy* facilities. Moving forward, all new facilities will be included to give us an accurate understanding of our entire carbon footprint. Furthermore, 96% of our Scope 1 and 2 carbon emissions are due to purchased electricity, which already has low-carbon options available in many markets. The remaining 4% is largely diesel for backup generation and refrigerant loss, which does not currently have widely available low-carbon substitutions. We are monitoring the industry for advancements like biodiesel and renewable diesel for diesel generators, biogas for natural gas generators, green hydrogen for fuel cell generators, large-capacity batteries, and low global warming potential refrigerants.

By conducting a grid carbon intensity assessment, we can predict the future carbon emissions of our energy sources. To manage the risk of carbon emissions resulting from these sources into the future, we are working towards procuring direct renewables that provide long-term and reliable energy supply. For more details see the [Energy Origination](#) section.

METRICS AND TARGETS


Here are the primary metrics and targets we use to measure or progress reducing our climate impact. For more information about these metrics, see [Appendix 2: Primary Metrics](#).

METRIC: ABSOLUTE GREENHOUSE GAS TOTALS

Our carbon emissions reporting is separated into Scope 1 and 2. Scope 1 includes emissions from diesel, natural gas, and refrigerants, while Scope 2 includes both emissions from customer IT equipment electricity and electricity used to service common areas and cool data halls. Scope 2 emissions are reported using both Market-based and Location-based methods.

For our internal (Scope 1 and Scope 2 Market-based) emissions, there was a decrease in GHG emissions from 637,000 metric tons of CO₂-equivalent (MTCO₂e) in 2018 to 613,000 MTCO₂e in 2022. This decrease was driven by increased renewable electricity supplies, even while occupancy expanded at new facilities. In 2022, our internal (Scope 1 and Scope 2) emissions were 69% of our total inventory. The remaining 31% were from Scope 3 emissions (see [Scope 3 Estimates](#)).

We completed construction on one new facility in 2022: Northern Virginia (NVA10). This facility, along with several other newer data centers, are still *pre-built-out* based on customer install schedules. Data from *pre-built-out* facilities is included in our absolute totals, but not in averages for 2022. The following facilities became *built-out* in 2022: Chicago (CHI2), Omaha - Council Bluffs (OCB1), and San Antonio (SAT5).




Absolute Greenhouse Gas Totals (MTCO ₂ e)			
Market Based			
Scope 1 & 2 Market Based	2018	2021	2022
Scope 1	19,552	29,021	22,931
Scope 2 Customer Equipment Electricity (Market)	403,705	374,037	407,057
Scope 2 CyrusOne Support & Admin Electricity (Market)	213,964	175,798	183,175
Total Scope 1 & 2 (Market)	637,221	578,855	613,164

Scope: Facilities that are directly managed.

We measure or estimate refrigerant loss for all global facilities. For most facilities this is based on maintenance records of additional refrigerant replaced in systems after servicing. For a few facilities without this data, we estimate refrigerant loss based on the total system charge. We have restated previous years with estimates of refrigerant loss based on known years to provide accurate comparisons.

In 2022, more than 96% of our Scope 1 and Scope 2 emissions came from purchased electricity (Scope 2), as is typical for the data center industry. Approximately 4% of our annual carbon emissions were generated from diesel, natural gas, and refrigerant loss in our operations (Scope 1). Since diesel is used for emergency backup generation, year-to-year use is highly variable based on the number of power disruptions that occurred. The quantities are summarized below.

It is worth noting that our annual 2022 change in market-based emissions (6% increase) diverged from the change in location-based emissions (10% increase). This is a demonstration of the impact that renewable electricity procurement can have on decoupling the growth of our business with the growth of emissions. Due to our increased renewable electricity procurement, our market-based emissions are lower in 2022 than they were in 2018, in spite of significant growth in business activity.



Absolute Greenhouse Gas Totals (MTCO ₂ e)			
Location Based			
Scope 1 & 2 Location Based	2018	2021	2022
Scope 1	19,552	29,021	22,931
Scope 2 Customer Equipment Electricity (Location)	448,966	704,195	790,382
Scope 2 CyrusOne Support & Admin Electricity (Location)	237,952	330,972	355,672
Total Scope 1 & 2 (Location)	706,469	1,064,187	1,168,986

Scope: Facilities that are directly managed.

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TARGET: CLIMATE NEUTRAL

Our primary target for Climate Impact is our *Climate Neutral by 2030* commitment. We will continue to refine the particulars of how we will draw down our carbon emissions while we grow as a company, but we are committed to operating *climate neutral* by 2030. In this commitment, we include both the carbon emissions from our support infrastructure (cooling, lighting, power handling, etc.) and those of our customers' IT equipment (servers) for Scope 1 and market-based Scope 2 emissions. Overall, our targets are set to contribute to the Earth staying below 1.5°C warming, striving for the SSP1-1.9 scenario (a world of sustainability-focused growth and equality).

In pursuit of this target, we track two metrics to understand the carbon emissions efficiency of our services: Carbon Usage Effectiveness (CUE) and Building Carbon Intensity (per square foot). While CUE (see next page) is the most common measurement of carbon efficiency in the data center industry, there are some limitations to this metric, so we also track carbon intensity based on building area. Taken together, these metrics provide a fuller picture of carbon efficiency in our portfolio.

TARGET: NEAR TERM SCIENCE-BASED CARBON TARGET (1.5°C PATH BY 2030) (SBTI TARGET)

As validated by the Science Based Targets initiative (SBTi) in 2022, CyrusOne Inc. commits to reduce Scope 1 and market-based Scope 2 GHG emissions 38% by 2030 from a 2021 base year, and to measure and reduce its Scope 3 emissions. In addition to our *climate neutral by 2030* target, this near-term target gives us important early milestones for making progress on our journey to *climate neutral*.

**HIGHLIGHT
SBTi-Approved!**

In 2022, our carbon target achieved validation by the Science Based Targets initiative (SBTi), bringing us into a growing global group of corporations who are committed to doing our share to help the world reach the Paris Agreement goals.

We are committed to the science-based target of reducing absolute Scope 1 and Scope 2 GHG emissions 38% by 2030 from a 2021 base year and to measure and reduce our Scope 3 emissions. To reach our goals, CyrusOne will upgrade the efficiency of our existing facilities, build new facilities with higher efficiency, increase renewable electricity at existing facilities, and start new facilities with renewable electricity. Since our largest Scope 3 emissions category is "Fuel and Energy Related Activities" (the upstream emissions from extracting, refining, and transporting fuels, as well as distributing electricity), using less electricity and switching to renewable types will reduce both our Scope 2 and 3 emissions.

Our participation in SBTi gives us important near-term targets on our way to *climate neutral* by 2030.



TARGET: CLIMATE NEUTRAL DATA CENTRE PACT

CyrusOne is a founding member of the European Union *Climate Neutral Data Centre Pact* — an agreement among data center operators, cloud service providers, and industry bodies in Europe to reach carbon neutrality by 2030. By participating in this pact, CyrusOne is supporting the EU *climate neutral by 2050* goal through a variety of targets related to efficiency, renewable electricity, water use, and circular economy. In addition to being a founding member, our own EVP and Managing Director of Europe, Matt Pullen, is Chair of the CNDCP's Board of Directors. As of the end of 2021, we procure 100% renewable electricity for our facilities in Europe.

Our last remaining sources of carbon in Europe are our diesel backup generators, a small amount of natural gas, and refrigerant loss. This represents less than 1% of our potential carbon footprint, so we purchased carbon offsets to balance the emissions from these minor sources.

In selecting carbon offsets, we looked for opportunities to support multiple objectives at once, which is why we selected Bonneville Environmental Foundation's "stacked offsets". These innovative offerings "stack" verified carbon offsets with efforts that support biodiversity. In our case, our verified carbon offsets were from the Parque Eolico Maldonado 50MW Wind Farm in Uruguay, while our biodiversity support is through tree planting for habitat restoration and recovery in the Western United States. Since the tree planting is not verified for its carbon reduction, we don't claim any carbon credit for it, but we know we're supporting our Offsite Habitat Improvement objectives.

HIGHLIGHT
A Pact Well Kept

CyrusOne was proud to be the first *Climate Neutral Data Centre Pact* signatory to have all its fully operational data centers in Europe comply with the Pact's terms. The pact was created to increase transparency in the sector for sustainability goals. The successful audit of our data centers' pact compliance is an example of how we are continuing to lead the industry on sustainability related issues.

While we are extremely proud of this success, we know there is always room for continued improvement. We will continue striving to be leaders in demonstrating verifiable environmental credentials.



London (LON2) - CNDCP compliant!

CARBON INTENSITY

We measure carbon intensity from several different perspectives:

- **Carbon Usage Effectiveness (CUE):** The ratio of total carbon (Scope 1 and 2) to the electricity delivered to IT equipment ($\text{kgCO}_2\text{e}/\text{IT kWh}$)
- **Grid Carbon Intensity:** The carbon use per megawatt-hour (MWh) delivered to our facilities from the grid, measured in metric tons of carbon dioxide equivalent per MWh of electricity ($\text{MTCO}_2\text{e}/\text{MWh}$). Also, the basis for GHGP Location-based emissions.
- **Building Carbon Intensity:** The carbon use per *built-out* colocation area in our facilities measured in metric tons of carbon dioxide equivalent per square foot ($\text{MTCO}_2\text{e}/\text{ft}^2$).

Each of these metrics gives us a different perspective on how we're doing to reduce the carbon intensity of our operations. They are detailed below.

METRIC: CARBON USAGE EFFECTIVENESS (CUE)

Since 96% of our Scope 1 and Scope 2 carbon emissions are due to electricity consumption, CUE and PUE are closely related within a facility, but can vary between different facilities based on the source of electricity. For more information about PUE, see the [Energy Efficiency](#) section.

Shown below is the CUE for *built-out legacy* and *modern*

Carbon Usage Effectiveness ($\text{kg CO}_2\text{e}/\text{IT kWh}$)				
Reporting Category	% by ft^2	2018	2021	2022
Legacy Dry Facilities	6%	0.73	0.61	0.62
Legacy Wet Facilities	19%	0.71	0.67	0.66
Modern Dry Facilities	68%	0.56	0.23	0.25
Modern Wet Facilities	8%	0.61	0.08	0.00
All Facilities	100%	0.61	0.29	0.28

Scope: Includes facilities that are built-out and directly managed by CyrusOne.

facilities that are managed directly. CUE has a minimum of zero and a lower value indicates greater efficiency. For an explanation of facility designations (*legacy, modern, wet, dry*) see [Appendix 2: Primary Metrics](#).

Modern facilities form the bulk of our operating capacity and have shown improvement in CUE since 2018, largely due to increasing their renewable electricity sourcing. In particular, our *modern wet* facilities are entirely in Europe, which began operating on 100% renewable electricity starting in June 2021. CUE at *legacy* facilities has shown less improvement, but is better on average since 2018, largely as a result of energy efficiency improvements and reductions in grid carbon intensity. Together these effects were able to reduce the company-wide average to $0.28 \text{ kg CO}_2/\text{kWh}$ server energy use in 2022. It is notable that in the above metrics our *modern dry* facilities significantly outperform our *legacy wet* facilities, despite using no water for cooling.

METRIC: GRID CARBON INTENSITY

To understand the impact that our electricity sourcing has on carbon emissions, we maintain a carbon intensity assessment. In this assessment, we see dramatic differences in carbon intensities between different non-renewable electricity supplies (i.e., supplier-specific, regional, or national grid electricity): the highest carbon intensity ($0.930 \text{ MTCO}_2\text{e}/\text{MWh}$) is almost 9 times higher than the lowest ($0.106 \text{ MTCO}_2\text{e}/\text{MWh}$). Having a facility-by-facility understanding of carbon intensity informs our decisions about prioritizing facility upgrades, renewable electricity procurement, and site selection.

To find our grid carbon intensities, see the [Location profiles](#) for each facility on the CyrusOne website.

METRIC: BUILDING CARBON INTENSITY

To find our building carbon intensity, we divide our Scope 1 & 2 carbon emissions by *built-out* colocation square feet at directly managed facilities. A lower carbon intensity indicates greater efficiency. "*Built-out*" means that a customer has not only rented the space but has also installed their servers and begun to draw power. For an explanation of facility designations (*legacy, modern, wet, dry*), see [Appendix 2: Primary Metrics](#).

All categories of Building Carbon Intensity improved driven by similar factors discussed under Carbon Usage Effectiveness (above).

METRIC: SCOPE 3 ESTIMATES

Our Scope 3 emissions are not directly emitted by CyrusOne. These emissions are from sources indirectly associated with CyrusOne, such as construction materials (capital goods), fuel and energy-related activities, business travel, employee commuting, and customer-operated facilities (downstream leased assets). Note that electricity used by customer servers inside facilities that we operate are counted as Scope 2 emissions, and their associated fuel-and energy-related activities are included in Scope 3.

Building Carbon Intensity (MTCO ₂ e/ft ²)				
Reporting Category	% by ft ²	2018	2021	2022
Legacy Dry Facilities	6%	0.35	0.40	0.24
Legacy Wet Facilities	19%	0.26	0.25	0.23
Modern Dry Facilities	68%	0.23	0.13	0.14
Modern Wet Facilities	8%	0.31	0.09	0.00
All Facilities	100%	0.25	0.16	0.16

Scope: Includes facilities that are built-out and directly managed by CyrusOne.

See how we calculated the emissions from these sources in [Appendix 1: Methodology](#).

These results show the variability of our Scope 3 emissions. The Capital Goods (construction materials) category is highly variable due to the fluctuating number of facilities built in a given year (all emissions are recognized in the calendar year the facility completes construction). Most of our Scope 3 emissions come from the Fuel-and-Energy-Related Activities category (upstream emissions from the extraction, refining, and transport of fuels), which are directly proportional to the fuel-based electricity, diesel, and natural gas we consume on-site at our facilities. On the other hand, our smallest Scope 3 emissions come from the Business Travel and Employee Commuting categories, which are so small that they are considered insignificant in our greenhouse gas accounting. We have one customer-operated facility that shares their energy data with us, allowing us to track our Scope 3 emissions. This represents 1% of our colocation building area.

Scope 3 Emissions (MTCO ₂ e)			
Category	2018	2021	2022
Capital Goods (Construction Materials)	70,803	0	23,132
Fuel-and-Energy-Related Activities	169,913	340,139	271,646
Business Travel	567	137	609
Employee Commuting	1,217	1,178	1,269
Downstream Leased Assets (Customer-operated Facilities)	0	1,729	257
Total	242,500	341,454	296,914

Scope: Major Scope 3 components.



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WATER

In many data centers, water is consumed for cooling purposes, replacing electricity or other energy sources. However, we recognize that water is a limited resource in high demand, meaning that issues with water supply could reduce our access to water for operations or increase friction with local communities. Facilities dependent on water for cooling may face operational interruptions or require costly retrofits to less water-intensive types of cooling. To minimize risk, we strive to make our operations as water-efficient as possible, with the goal of reaching *net positive water* in regions with high water stress. Most of our facilities use water-free cooling, and we have begun to acquire BEF Water Restoration Certificates® (WRCs) to restore water to local ecosystems, making our presence a net benefit to the watersheds where we operate. We believe that water has been the “invisible resource” for too long in the data center industry and it is time to develop reporting standards to integrate water into energy and carbon reporting to tell the full picture of a data center’s impact on resources and the local region.

STRATEGY

Our water conservation strategy has three main goals: 1) remove barriers to data center efficiencies, 2) design to avoid dependence on water for cooling, and 3) restore water in high-risk regions.

DATA CENTER EFFICIENCIES

Data centers like ours have great potential to achieve energy and greenhouse gas improvements by combining the computing power of many smaller data rooms into fewer larger data centers. The concentration of this computing power allows for more efficiencies, but it also concentrates the environmental impacts into a single region. For issues like greenhouse gas emissions, this concentration is of small consequence since the emissions go into the same atmosphere and climate change is a global issue (though pollutants from fossil fuel power plants can have local air quality impacts). But for purely local issues like water stress, concentrating the water demand into a single watershed can have big impacts on local communities and ecosystems. Our strategy is to remove the negative consequences of water demand so we can enable the efficiencies brought by large data centers.

PLAN FOR SUSTAINABLE FUTURE

We aim to build and maintain facilities that can function sustainably both now and into the future. With a high likelihood of strained water resources in many regions where we operate, we strive to avoid dependence on water for cooling in both our new and existing facilities. Most of our facilities already use cooling systems that do not consume water (water-free cooling), and we continue to update our cooling systems at existing facilities. We also use future regional water stress projections to inform site selection and design for new facilities. This strategy allows us to make improvements to facility reliability and resilience while becoming future-proof against increased local water stress.

In the past, because the electrical grid relied on thermoelectric generation (consuming water to make steam and then electricity, usually with fossil fuels), it was generally thought that onsite water consumption for cooling to reduce electrical use was a substitute for water that wasn’t consumed at the power plant. However, we understand that current and future electrical generation will rely more and more on renewable sources. These energy sources (solar, wind, etc.) are dramatically less water-intensive than yesterday’s thermoelectric fossil-fuel generation.

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When we switch to renewable electricity to achieve our *climate neutral* target, that power will consume effectively no water in our electricity supply chain. Since the majority of our sites consume no water for cooling, our total water consumption at these sites will be negligible.

To learn more about the embodied water of electricity and onsite cooling tradeoffs, see [The Path to a Net Water Positive Data Center](#) on our website.

Our strategy leaves us largely insulated from future water risk, as opposed to many other data centers that are designed around water consumption. This underscores the importance of considering PUE (Power Usage Effectiveness) and WUE (Water Usage Effectiveness, see below) in tandem, rather than treating them as isolated metrics.

For more information about PUE, see the [Energy Efficiency](#) section.

RISK-BASED WATER MANAGEMENT PROGRAM

Water as a resource is chronically undervalued. We manage water as a risk, rather than simply a cost, as we understand the risks that water stress can bring to our business continuity and to the communities in which we operate.

Water stress is highly regional. Some areas have abundant water, but many areas are facing water stress from increasing demand and a decreasing supply of fresh water. Because of this, no single approach will work for every situation. To take a risk-based approach, we analyzed every watershed in which we operate to determine its local water stress, both now and projected into 2030 and 2040. In areas where water is scarce, we prioritize conservation. But we also want to do more. In these regions, we have begun to partner with environmental nonprofits to support projects that restore the water flows to overdrawn watersheds. This provides benefits to both human water supplies and biodiversity, making our presence in that region *net positive* for water.

RISK MANAGEMENT

There are two main ways we manage our risk of water supply disruptions and the operational disruptions that they bring. The first step is to understand the current and future regional water stress and risk to our facilities where we operate through a Water Risk Assessment (see below). The second is to use less water in our operations, which insulates us from whatever water risk is present in our regions. In areas with potential water shortages in the future, decreasing our dependence on water can help us avoid issues with competing water interests, increased water prices, and reduction of supply. CyrusOne's water-free cooling design provides significant insulation from the risk of water-supply-based business disruption in regions where water is scarce. As shown in the portfolio summary in the [Energy Efficiency](#) section, 74% of our total colocation floor area is cooled by water-free cooling, which significantly insulates our portfolio from the regional water stress described in our Water Risk Assessment. We firmly believe that our aggressive stance on prioritizing water conservation will become an opportunity for success as water scarcity increases.



Dallas (DFW3) Water-free Cooling Equipment

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WATER RISK ASSESSMENT

To understand the risk of water supply disruption for our data centers, we conduct an annual assessment of current and future water stress in the regions where we operate. This helps us to monitor the water availability both now and projected into the future, to prioritize facilities for our water conservation efforts, and to reduce risk by avoiding dependence on water. This is part of our overall climate risk strategy detailed in the [Climate Risk](#) section.

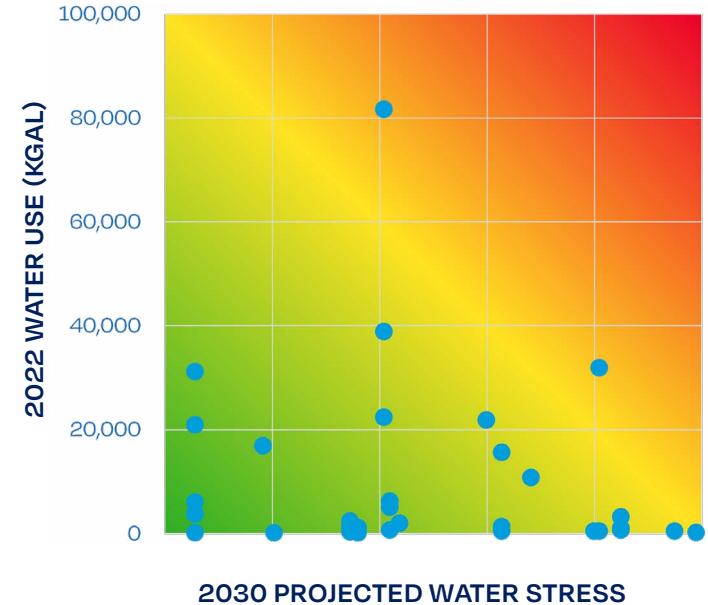
At CyrusOne, we recognize the risk of business interruption at some sites due to water shortages or price increases in just the next decade. With the information from this assessment, we can understand the level of water stress in each region and can take informed steps to address the water risk for our facilities.

RESULTS

For each of our facilities with water use data, we evaluate water risk by comparing water use to local water stress, current and future. The heatmap to the right illustrates this comparison for each facility's 2022 water use and its region's projected 2030 water stress. This chart illustrates the success of CyrusOne's water-free cooling strategy — most of the facilities are already using relatively little water. Additionally, only two facilities fall into the high-risk exposure orange or red areas which indicate high use sites in regions expected to experience high water stress, indicating where we should focus our water reduction strategies.

The Water Risk Assessment provides us the foresight to plan for efficiencies and alternatives now, rather than be surprised by water scarcity in the future. Our water risk assessment informs us that 79% of our facilities are projected to face increased water stress in 2030 (compared to 2020), and 58% of our sites are projected to be rated high or extremely-high stress by 2030. Fortunately, the vast majority of these sites are already low water users, underscoring the benefit of water-free cooling.

2030 PROJECTED WATER STRESS HEAT MAP



UPDATES

We update our Water Risk Assessment annually to monitor this important issue and provide our business processes with the latest data for making decisions. As new facilities are added to our portfolio, they will be added to the next assessment. We use the results of the Water Risk Assessment to inform many decisions inside the company, including site selection, operations, and new facility design.

METRICS AND TARGETS

Here are the primary metrics and targets we use to measure our progress on water conservation issues. For more information about these metrics, see [Appendix 2: Primary Metrics](#).

TARGET: NET POSITIVE WATER IN HIGH-STRESS REGIONS

Our target for water conservation is not to simply do “less bad” but to do “more good” and leave regions better than if we were never there. With this in mind, we have set a target to make all of our facilities in high water stress regions into *net positive water* facilities. We accomplish this in three steps. First, we identify which regions are considered *high* or *extremely high* water stress using our Water Risk Assessment. Then, we attempt to reduce onsite water usage through operational efficiency measures and upgrades. Finally, we partner with environmental nonprofits to restore water flows in these regions through [Bonneville Environmental Foundation](#) (BEF) Water Restoration Certificates® (WRCs). If we can restore at least 20% more water than we use, we consider this to be a *net positive water* facility.

We continue to update our multi-year plan to convert all of our facilities that are currently in high-stress regions to *net positive water*. After we accomplish our *net positive water* goals, we will continue to purchase WRCs annually to maintain our *net positive water* status and monitor our Water Risk Assessment for new regions that become high water stress. When they do, we will make a plan to convert facilities in those regions to *net positive water* facilities.

METRIC: NUMBER OF NET POSITIVE WATER FACILITIES

This year we added our final North Texas facility, Dallas (DFW2), to our *net positive water* portfolio, bringing our total facilities to ten. This marks a milestone for us – as of 2022, all of our facilities in regions classified as *extremely high* water stress by WRI now restore more water to local watersheds than they remove. Our next step is to expand the program to facilities in *high* stress regions.



ACHIEVEMENT UNLOCKED

As of 2022, all of our facilities in regions classified as *extremely high* water stress by WRI now restore more water to local watersheds than they remove.



HIGHLIGHT

Keeping the Verde River Green

Our large data center campus in the Phoenix, Arizona region has been net water positive since 2019 through our purchase of Bonneville Environmental Foundation Water Restoration Certificates® (WRCs). For 2022, our WRCs went to support irrigation modernization at the Tres Brisas Ranch on the Verde River.

With this support, the family owners of the ranch converted their previous flood irrigation system to a much more efficient wheel line system. In addition, the water will be drawn from the river farther downstream, improving critical water flow through that stretch of river to the benefit of fish and other wildlife. We are always happy to support projects like this with multiple benefits to communities, biodiversity, and our customers!

METRIC: ABSOLUTE WATER WITHDRAWAL, CONSUMPTION, DISCHARGE, AND RESTORATION

We estimate the total water withdrawn, consumed, and discharged by our facilities, regardless of whether the water goes toward cooling, facility maintenance, or domestic water uses. At our *net positive water* facilities, we have purchased WRCs which restore at least 120% of the amount of water we withdraw for these facilities to the regional watershed. See more about our *net positive water* facilities above.

Net withdrawn water is the total water taken in by our facilities, regardless of how it is used, minus the amount of water restored by WRCs. All sources of withdrawn water are municipal supply except for the geothermal cooling system at our Cincinnati (CIN4) facility in Hamilton, Ohio. This system pumps groundwater through the facility, using its low ambient temperature for cooling, before discharging it to surface waters. Since some of our facilities rely on water for cooling, water withdrawal indicates how vulnerable these facilities are to regional water shortages.

Once water enters our facilities, it is either 1) discharged to water treatment works and returned to the watershed or 2) consumed through evaporative cooling or irrigation. Since our consumption of water removes it from the watershed, water consumption indicates our impact on regional water availability.

Water Withdrawal, Consumption, Discharge, and Restoration (kgal)			
Category	2018	2021	2022
Water Withdrawal	171,965	359,883	334,353
Water Consumption	142,709	326,273	302,983
Water Discharge	29,257	33,611	31,370
Water Restoration	0	-12,151	-17,373
Net Water Withdrawal	171,965	347,732	316,981
CIN4 Geothermal Water Withdrawal and Discharge	788,400	788,400	788,400

Scope: Facilities for which water data is available available (representing 99% of colocation building area). For more information, see Appendix 2: Primary Metrics.

For more information about the scoping of our water conservation metrics, see [Appendix 2: Primary Metrics](#).

Our overall use of water has increased over time, representing the growth in the number of facilities we operate and, therefore, our overall demand for water inputs. However, we are making progress – in 2022, absolute water withdrawal decreased by 7% from the previous year, and net water withdrawal decreased by 9%. The variation in our water discharge (from water-free cooled facilities) is expected based on annual variation in weather conditions (since it is largely driven by irrigation) and is well within historic range. Our water restoration efforts have increased as we add more facilities into our *net positive water* portfolio.

METRIC: WATER WITHDRAWAL, CONSUMPTION, AND DISCHARGE IN HIGH-STRESS REGIONS

To focus our attention on areas where water is scarce, we track the total water withdrawal, consumption, and discharge from regions listed as currently in *high* or *extremely high* stress, according to the [Aqueduct Water Risk Atlas](#).

This metric includes all 19 of our facilities in *high* or *extremely high* water stress regions with water data.

The increase in water consumption between 2018 and 2022 is due to two newer facilities that were designed with water-consuming cooling equipment coming online in Europe (these facilities were designed before our water-free target was set). We are investigating potential efficiency upgrades to save water at these sites.

Water Withdrawal, Consumption, Discharge, and Restoration in High-Stress Regions (kgal)			
Category	2018	2021	2022
Water Withdrawal	63,040	194,861	202,202
Water Consumption	44,682	183,999	187,690
Water Discharge	18,358	10,862	14,512
Water Restoration	0	-12,151	-17,373
Net Water Withdrawal	63,040	182,710	184,829

Scope: Facilities for which water data is available in high water stress regions. For more information, see Appendix 2: Primary Metrics.

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METRIC: ONSITE WATER USAGE EFFECTIVENESS (WUE SITE)

The standard metric for measuring water efficiency in data centers is Water Usage Effectiveness (WUE). This metric was created by The Green Grid specifically for data centers to understand and compare their water impact on an intensity basis. In the past, we have used the term WUE to refer to the water intensity of our data centers' onsite water use. Going forward, we will refer to this metric as WUE Site. In an effort to increase transparency around water consumption, we also report the water intensity of the electricity used in the facility combined with the onsite water, which we will refer to as WUE Source (see below).

WUE Site is a ratio of liters of annual water use to kilowatt-hours of server energy use, and thus is measured in liters per kilowatt-hour (L/kWh). Unlike PUE, it has a theoretical minimum value of zero (no water withdrawn for the site). Because our WUE Site measurements include all water onsite (including water used for domestic use, facility maintenance, and landscape irrigation), even our zero water-cooling facilities have a WUE Site above zero. For an explanation of facility designations (*legacy*, *modern*, *wet*, *dry*) see [Appendix 2: Primary Metrics](#).

While water use at our *dry* facilities has remained low for both *legacy* and *modern* facilities, our *legacy wet* facilities' water use has remained higher. Our *modern dry* facilities have improved in efficiency over time due to some updated operational strategies and our *net positive water* program. Because these facilities generally only use water for facility maintenance and domestic water, the variability in water demand is largely driven by year-to-year changes in irrigation requirements based on

WUE Site (L/kWh)				
Reporting Category	% by ft ²	2018	2021	2022
Legacy Dry Facilities	6%	0.04	0.08	0.09
Legacy Wet Facilities	19%	1.87	2.47	2.13
Modern Dry Facilities	68%	0.15	0.05	0.04
Modern Wet Facilities	8%	3.12	2.94	2.71
All Facilities	100%	0.63	0.66	0.57

Scope: Facilities for which water data is available. For more information, see [Appendix 2: Primary Metrics](#).

local weather conditions. The growth of water use in our *modern wet* facilities is discussed above in [Metric: Water Withdrawal, Consumption, and Discharge in High-Stress Regions](#). The gradual increase of water use in our *legacy wet* facilities is generally due to declining server power at these older data centers, which lowers the denominator of the WUE calculation.

METRIC: TOTAL WATER USAGE EFFECTIVENESS (WUE SOURCE)

As discussed in the [Building For Sustainability](#) section, as long as we are reliant on grid electricity that includes thermoelectric sources to power our facilities, we are indirectly responsible for the consumption of large amounts of water in the production of that electricity. WUE Source is an estimation of the total water burden of a facility. This includes water consumed onsite as well as water consumed in the production of the electricity we use, referred to as "supply chain water". Supply chain water estimates are based on the World Resource Institute's [Guidance for Calculating Water Use Embedded in Purchased Electricity](#).

WUE Source is a ratio of liters of supply chain water plus onsite water usage to kilowatt-hours server energy use, and thus is measured in liters per kilowatt-hour (L/kWh). For an explanation of facility designations (*legacy*, *modern*, *wet*, *dry*) see [Appendix 2: Primary Metrics](#).

It is interesting to note that the results of our WUE Source comparison dispute the conventional wisdom in our industry that water evaporated onsite for cooling is made up for by the energy supply chain water saved by using less electricity. On average, our *wet* facilities, which use evaporative cooling, have a significantly higher total water burden than our *dry* facilities.

WUE Source (L/kWh)				
Reporting Category	% by ft ²	2018	2021	2022
Legacy Dry Facilities	6%	2.86	2.99	2.85
Legacy Wet Facilities	19%	5.07	7.04	5.91
Modern Dry Facilities	68%	3.92	3.62	1.83
Modern Wet Facilities	8%	5.99	3.32	2.71
All Facilities	100%	4.17	4.01	2.45

Scope: Facilities for which water data is available. For more information, see [Appendix 2: Primary Metrics](#).

DISCOVERY UNLOCKED

Total Water Burden (WUE Source) for our facilities in 2022:

- **Wet:** 4.42 L/kWh
- **Dry:** 1.89 L/kWh

Conclusion: Even when we include the water used in electricity generation, facilities that don't evaporate water have a significant advantage over those that use evaporative cooling.

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BIODIVERSITY

Our data center campuses are mostly covered by buildings, but the small amount of landscaped area that we own still offers an additional opportunity for sustainability efforts. While most of each data center campus is occupied by buildings, we seek opportunities for the surrounding land to support a diversity of resilient biological networks, as well as our digital ones.

STRATEGY

As governments and companies throughout the world turn their attention to the biodiversity crisis, standardized metrics and frameworks for assessing habitat impact are under development. In the meantime, we approach our biodiversity strategy through the same hierarchy of control that we use to approach other aspects of our environmental portfolio (energy, water, carbon, and materials). First, we have immediate control over reducing our biodiversity impact within the physical footprint of our facilities. Prioritizing site selection in zones designated for industrial development ensures that we avoid areas of high habitat quality. Next, once our data centers are built, we can use the available green space to give back to what should naturally be there by landscaping with locally appropriate native species in a landscape design that encourages benefits to wildlife. Finally, we seek offsite opportunities to improve habitats near our facilities by working with local nonprofits that have conservation expertise.

Alongside our important larger commitments to sustainability, CyrusOne works to ensure that we are making progress at a local level and looking after the environment and habitats surrounding our facilities. We made a formal pledge to biodiversity in our [2020 Sustainability Report](#), making it an additional pillar of our commitment to the environment, alongside water, carbon, energy, and circular economy.

Furthermore, we are closely following the development of reporting frameworks like the Taskforce for Nature-related Financial Disclosures (TNFD) and Science-Based Targets for Nature (SBTN). The initial draft guidance from those frameworks is focused on spheres of influence, such as onsite work and offsite work within our supply chain. For onsite strategies, the draft guidance from TNFD and SBTN suggests a similar hierarchy of control to ours, indicating that we're on the right track. We will continue to monitor the development of these frameworks and use them to inform our onsite activities.

For offsite strategies, we will incorporate guidance as it is developed, but early indications suggest that creative interpretation will be necessary for our industry. Our supply chain provides a less direct link to habitat mitigation efforts than those that include agricultural products or materials harvested from forests. The primary aspect of our supply chain that impacts habitat is electricity generation. These and other impacts come largely in the form of water use, so the work we have done so far with our watershed restoration efforts is connected to one of the primary biodiversity impacts from our supply chain.

Finally, we look for opportunities to provide biodiversity co-benefits when we work on other sustainability efforts. For example, when selecting Water Restoration Certificates or Carbon Offsets, we look for projects that not only provide the benefit to water or carbon, but also to biodiversity.



Dublin (DUB1) meadow in summer

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HIGHLIGHT

Data Centers of the Future Start with a SPARK

In September of 2022, CyrusOne and our partners at Ramboll teamed up with NYU's Tandon School of Engineering to brainstorm sustainability solutions to enhance biodiversity at future data centers as part of the SPARK competition.

The first place team consisted of students Joanna Ibrahim, Matthew Maung, Nikita Pola and Aaron Yang. The innovations that the team and others came up with included:

- Reuse the heat generated in the data center to support adjacent greenhouses to grow food for the local community, or to create electricity using a thermal electric generator
- Use a green façade to enhance the building appearance, improve biodiversity, and provide additional building insulation
- Capture rainwater for site use including greenhouses and retention ponds
- Use more recycled content in normal construction materials
- Recover grey-water discharge to use for landscaping/greenhouses
- Use biomimicry, the imitation of the elements of nature for the purpose of solving complex problems, with landscaping and grow more threatened plant species onsite

We appreciate the competitors' creativity and look forward to the green data centers of the future!

RISK MANAGEMENT

Our approach to managing risks related to habitat largely revolves around minimizing the harm from our sites. To evaluate this, we use two forms of risk assessments: (1) Environmental Impact Assessments and (2) Protected Areas Assessments. For more details about our methodologies for these assessments, see Appendix 1: Methods.

ENVIRONMENTAL IMPACT ASSESSMENTS

Habitat impacts are a significant aspect of the Environmental Impact Assessments required by law in many markets before the construction of a new facility. By considering sensitive habitats when selecting project sites, we avoid harm and minimize the need for remedial activities and project delays.

PROTECTED AREAS ASSESSMENT

To monitor our ongoing risk related to habitat, we conduct annual Protected Areas Assessments to verify that our facilities are not adjacent to any protected areas or that adjacent areas have not become protected since construction. This allows us to continue to monitor potential critical habitat issues after a site is in operation.



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ONSITE HABITAT IMPROVEMENT

STRATEGY

We aim to achieve several objectives through landscaping at our buildings. By cultivating locally adapted native plants, we can minimize the water and other resources needed for maintenance while benefiting nature. Although most of our facilities have minimal landscaping, small areas can have a big impact if we create wildlife habitat through careful plant selection and placement. At sites with improved habitat, we've integrated plants, features, and practices that attract local pollinators and migratory birds. Our landscape designs include attention to the diversity of forage options throughout the seasons as well as creating shelter and nesting locations. Though we are in the early stages of implementing habitat landscape improvement across our portfolio, we have learned from the projects that we've pursued thus far and are prepared to apply our methods to new sites and existing facility upgrades going forward.

METRICS AND TARGETS

Here are the primary metrics and targets we use to measure our progress on onsite habitat improvement. For more information about this metric, see [Appendix 2: Primary Metrics](#).

TARGET: HABITAT NETWORKS

As our facilities are strategically located to primarily improve data networks, we recognize that the same strategic placement can help provide habitat networks as well. Our target is to improve habitat at each of our facilities with landscaping, focusing on pollinator-friendly gardens to support local biodiversity.

For us, this means landscaping that uses native and climate-adapted species to provide food, water, shelter, and nesting for pollinators and other wildlife. In addition, we prefer landscape management practices that conserve water, avoid unnecessary disturbance and chemical use, and strive for a natural aesthetic.

We understand that third-party verification is crucial to ensure our efforts support wildlife in a rapidly changing world. At a minimum, we will certify our landscapes using the [National Wildlife Federation's \(NWF\) Certified Wildlife Habitat®](#) program in North America and follow the [DCs for Bees Pollinator Plan](#) in Europe.

METRIC: FACILITIES WITH IMPROVED HABITAT

To measure progress toward our target, we will track and report how many of our facilities with landscaping have improved habitat onsite that supports biodiversity in the area.



ACHIEVEMENT UNLOCKED

In 2022, the upgraded landscaping at our Dallas (DAL3) data center became the first in our portfolio to achieve National Wildlife Federation Certified Wildlife Habitat status.

Habitat Networks			
Category	2018	2021	2022
Facilities with Improved Habitat	0%	6%	9%

Scope: Directly managed facilities that have landscaping

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OFFSITE HABITAT IMPROVEMENT

Where our portfolio doesn't offer an opportunity for planting and habitat creation, we strive to work with local non-profit organizations and communities to enhance biodiversity in local areas.

STRATEGY

Given our industry and the size of our company, we are working to find a way to meaningfully contribute to improving biodiversity. We recognize that this is not a problem we can tackle on our own — it will require partnership, creativity, and collaboration. A good example in our industry is [Host In Ireland's DCs for Bees](#) program, which provides a toolkit for pollinator plantings on-site at data centers and has also supported native plantings off-site at properties managed by the Irish Native Woodland Trust.

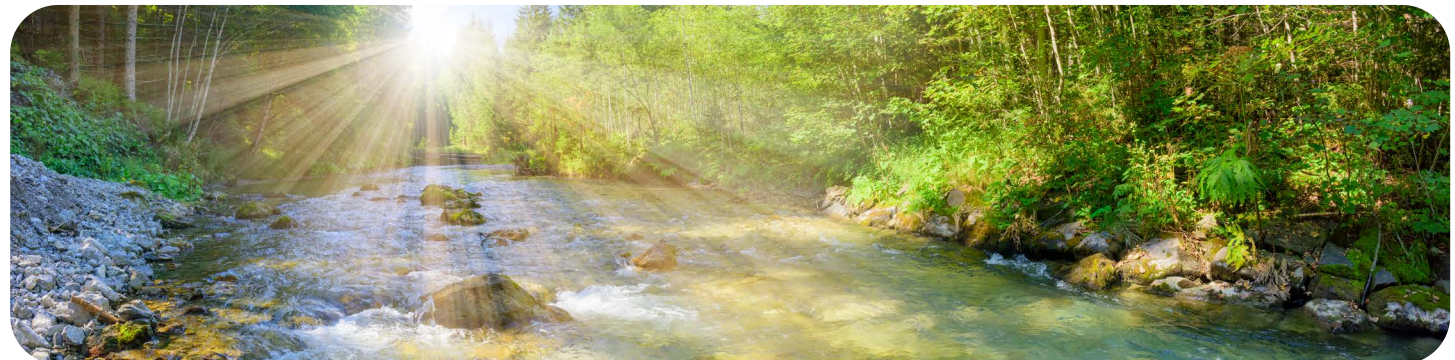
We know that biodiversity is intertwined with other environmental targets that we have set. For example, the electricity we consume can impact biodiversity through fossil fuel extraction and water consumed during electrical generation. These impacts will decrease significantly as we transition to renewable energy, but we want to do more. However, there aren't readily tradable credits for habitat restoration in the same way that there are for carbon offsets,

RECs, and water restoration. Biodiversity gains are more often a co-benefit of projects completed for other purposes. So, our strategy is to look for projects with multiple co-benefits to help us work toward several target topics at the same time. The co-benefits can include expanding or preserving wildlife habitat, reducing water stress, improving communities, carbon reduction and removal, or improved renewable energy.

One way that we have pursued this strategy is through the purchase of [Bonneville Environmental Foundation \(BEF\) Water Restoration Certificates® \(WRCs\)](#) to increase water flows, improving regional water stress for both human use and local wildlife habitat. For more information about this water restoration, see [Water](#). In selecting carbon offsets, we have also worked with BEF to use "stacked offsets" which pair a certified carbon offset with additional funding to support US West Coast tree plantings. We do not claim carbon credit for these additional tree plantings, but support them as part of our offsite habitat improvement goals. We have begun to map out additional offsite efforts to maximize biodiversity co-benefits. Possibilities include expanding partnerships with conservation organizations, supporting nature-based carbon removal or emissions reductions projects, and additional water restoration projects.

METRICS AND TARGETS

To tackle this problem innovatively, we are avoiding prescribing metrics in the short term; however, we are closely following the development of reporting frameworks like the Taskforce for Nature-Related Financial Disclosures and Science-Based Targets for Nature. We will continue to monitor these frameworks for emerging metrics and targets.



CIRCULAR ECONOMY

CyrusOne is developing and expanding our strategy for transitioning to a circular economy. In general, one of the key strategies of a circular economy is dematerialization: transitioning material processes to digital ones. We recognize that data centers play a central role in dematerialization by providing a reliable digital infrastructure that can make alternatives not only less material-intensive but also more energy and labor efficient. Other sections of this report detail how we are reducing the environmental burdens of data centers so the benefits of dematerialization do not simply shift the impacts to carbon or water. In this section, we describe our efforts at making our material streams more circular.

For material issues, CyrusOne's challenges are more closely related to those of a typical real estate company than to those of an in-house data center operator. For example, the EU *Climate Neutral Data Centre Pact's* Circular Economy commitment sets a high bar of reusing, repairing, or recycling 100% of used server equipment. However, as we described in the [Introduction](#), we do not control the servers in our colocation facilities — they belong to our customers. Due to this, our operational material waste generation is very low, largely consisting of customer packaging and break room waste. However, because we are building new facilities each year, our primary opportunity to contribute to the circular economy transition comes from incorporating circularity into our construction practices. Our efforts in both construction and operations are detailed below.

CONSTRUCTION CIRCULARITY

CONSTRUCTION UPSTREAMING

One technique that we have used to improve the circularity of our construction practices is through "upstreaming" construction so more of it happens at the manufacturer rather than on the construction site. This seemingly simple change in support of our innovative modular construction techniques means that each manufacturer's waste stays with the manufacturer, where they can better manage it in bulk. For example, during construction, a process may generate a remnant 5-foot carbon steel pipe. If this fabrication occurred at the construction site, the pipe remnant would most likely end up

in the recycling bin since the opportunities to reuse it would be limited. At a high-volume manufacturing facility, however, there are many more opportunities for that pipe section to be used rather than recycled.

CONSTRUCTION MATERIAL CHOICES

Our construction material choices also have opportunities to close the loop and contribute toward a circular economy. We are evaluating the potential for recycled content and low-carbon construction materials in addition to other environmentally preferable materials, like low-VOC paints and adhesives. Each choice is another step on the road to circularity and reducing the other environmental impacts of construction.

In 2022, we were able to test one of our new carbon reduction strategies during construction of our Chicago (CHI3) data center. 78% of the concrete we used in the building included fly ash in the mix, replacing some of the Portland cement. The mix replaced from 17% to 30% of the Portland cement with fly ash, which reduced the carbon footprint of the concrete by a similar percentage. Since concrete is the most common construction material used in our facilities, this is a significant improvement.

CONSTRUCTION RECYCLING

Once construction is underway, there are opportunities to recycle discarded construction and demolition materials. Construction site recycling practices are built into our standard process and are one of our requirements when selecting general contractors.

OPERATIONS CIRCULARITY

While construction is our major opportunity to contribute towards the transition to a circular economy, we still look for opportunities to improve waste and circularity in our operations.

PAPERLESS PROCESSES

We have transitioned several of our standard business processes to paperless systems. Two examples with major impacts are our customer contracts system and our commissioning documentation. By transitioning from paper to electronic formats, we are (in our own small way) realizing the potential of dematerialization that data centers can offer to the economy at large.

GENERAL RECYCLING

As part of our service to customers during their move-in process, we provide recycling for their packaging, such as cardboard boxes. For each facility, this waste generation is highly episodic — we may have a few months of this waste during move-in and then very little for years until the customer upgrades their equipment and generates more packaging. Many of our data centers also offer meeting rooms for customer use, and as part of this service, we offer office recycling of paper and drink containers at many locations. This matches the recycling we implement at our US and European headquarters.

BATTERY RECYCLING AND WASTE REDUCTION

The most significant part of our waste stream is the spent lead-acid batteries that power our Uninterruptible Power Supply (UPS) systems. In the event of a power outage, these systems provide a large amount of power capacity for 5-10 minutes as the backup generators come online, ensuring continuous uptime to our customer environments. For our traditional UPS systems (the majority of our sites), the batteries must be replaced every 5-7 years and our spent batteries are recycled by our battery service provider. In 2022 we recycled around 1.3 million pounds of batteries.

METRICS AND TARGETS

Here are the primary metrics and targets we use to measure our progress on waste management. For more information about this metric, see [Appendix 2: Primary Metrics](#).


METRIC: WASTE AND RECYCLING WEIGHTS

We have gathered centralized waste and recycling records for 29 of our facilities for the last two years (representing 51% of our directly managed colocation square feet), and estimated the remainder based on colocation square feet. We are working on centralizing data for the remaining facilities.

As expected, the waste generated each year can be highly variable, but is very small for a real estate company of our size. This is why we do not consider waste and recycling to be a material issue for our reporting, but will continue to monitor it.

We are also researching how to reduce this waste by upgrading our UPS technology. Our pilot project at two New York Metro area data centers replaced our standard lead-acid (VLRA) UPS system with an advanced lithium-ion UPS system. Lithium-ion batteries have a much longer expected lifespan, in part because they do not degrade during power outages as lead-acid batteries do. The lithium-ion batteries' expected lifespan of at least 15 years allows us to build operational resilience while significantly reducing battery waste. These two projects resulted in diversion of 84 short tons of lead battery waste.

We are also keeping an eye on the development of nickel-zinc battery technology, which shows promise as a more stable and power-dense option than lithium-ion, but with a similar long lifespan.



Waste and Recycling (short tons)			
Reporting Category	2020	2021	2022
Non-regulated Landfilled	1,342	1,504	1,883
Non-regulated Recycled	260	234	501
Batteries Recycled	1,200	1,200	626
Recycling Rate	52%	49%	37%

Scope: Includes operational waste from facilities directly managed by CyrusOne. Includes non-regulated waste and spent battery recycling.

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AIR POLLUTION

We are not a significant generator of major air pollutants since our primary source is our diesel generators used for emergency generation only. To demonstrate the insignificance of our air pollutant generation, we estimated the amount of six common pollutants emitted from our diesel generators during 2022.

These generators are operated under air permits with recordings of run time and fuel inventory. The case study demonstrates the low levels of emissions from our facilities relative to heavy industrial emitters and why we do not consider air pollution to be a material issue for our reporting.

WHERE ARE YOUR SERVERS?

As we described in the [Introduction](#), as a colocation data center operator, we do not own or control the servers of our customers located in our facilities. Rather, these servers are owned, operated, and retired by our customers. This is different from owner-operated data centers — such as those operated by Microsoft, Amazon, or Google — where they manage both the data center and its servers. Because of the importance of data security, server end-of-life management is managed by our customers so they retain custody of their confidential data. Because of this, the decision to dispose of, recycle, or reuse these assets is entirely up to them. To support our customers, we do offer onsite recycling service where our customers can choose to deposit their retired assets in recycling bins to be recycled by our partner. See our highlight story “E-Waste Recycling – Hardware and Beyond”. In addition, we practice e-waste recycling for our owned electronic assets, such as teammate laptops and monitors, but this is a small component of our overall waste profile.

Air Pollution Emissions (short tons)	
Air Pollutant	2022
NO _x	207
CO	43
VOCs	9
PM10	5
PM2.5	3
SO ₂	6

Scope: Estimated emissions from diesel generators at directly managed facilities.

HIGHLIGHT
E-Waste Recycling – Hardware and Beyond



Electronic Recycling Solutions

While CyrusOne has long recycled its own electronics, in 2022 we implemented a new partnership with AIT Electronic Recycling

Solutions to provide electronic waste collection bins for our customers and team members as well. Each CyrusOne facility in the US now has a bin to provide a convenient way for them to properly recycle these materials. In addition to waste produced at work, customers and teammates can also bring in e-waste from home for recycling, including old computers, printers, keyboards, monitors, etc. In the first seven months of the partnership (May – December 2022), AIT picked up over 66,000 lbs. of recyclable materials! This new recycling program is a vital part of CyrusOne’s Circular Economy efforts to keep valuable materials in circulation and toxic materials out of the environment.

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OUR DUTY

At CyrusOne, we understand that we have a responsibility to act as good corporate citizens. We pride ourselves on our **Core Values** of *Community, Agility, Respect, Enjoyable Workplace, Ethics, and Exceptional Service* (referred to as CAREEE).

SOCIAL RESPONSIBILITY CATEGORIES

Our social responsibility efforts fall under the following four headings:

- **Responsible Supply Chain:** Because we have a relatively small number of teammates, our supply chain provides us an important opportunity to increase our social impact.
- **Responsibility to Our Teammates:** Our people are our most important resource, and we have a responsibility to promote their well-being and help them grow.
- **Responsibility to Our Customers:** We value our customers and work to deliver exceptional service and keep them safe when they're at our sites.
- **Responsibility to Our Communities:** We strive to build networks of resilience in the communities where we operate.

SAFETY ACROSS THE VALUE CHAIN

We see our responsibility to safety, not only to our employees, but across our value chain. We discuss how we address safety throughout the rest of this chapter. For a summary, you can see our [Health and Safety website](#) or link to the sections below:

- [Contractor Occupational Safety](#)
- [Employee Occupational Safety](#)
- [Customer Safety](#)



RESPONSIBLE SUPPLY CHAIN

At CyrusOne, we realize that much of our impact and influence on society comes through our supply chain. Our commitment to creating a responsible supply chain means that our ethics extend to 1) our relationship with our suppliers and 2) our suppliers' behavior. We have established practices to set clear guidelines and expectations for a responsible relationship with our suppliers, prevent conflicts of interest, and create mutually beneficial long-term relationships. It is also important to us that our suppliers conform with all applicable human rights standards, labor and employment laws and norms, and environmental regulations and best practices.

CyrusOne's 60 top suppliers, representing more than \$1.5 billion in annual spend, are in the following major categories:

- Architectural and engineering services
- Data center equipment providers
- General contractors (construction)
- Professional services such as accounting, payroll, consulting, and legal services
- Security services
- Utilities

STRATEGY

Our strategy to manage a responsible supply chain is to integrate our supplier ESG tools into all stages of the vendor lifecycle:

1. **Vendor Code of Conduct:** To properly communicate our values and expectations, CyrusOne provides suppliers with a comprehensive framework of standards in the form of our [Vendor Code of Conduct](#).
2. **New Vendor Screening and Prequalification:** Our approach to managing risks related to our suppliers is embedded in our initial vendor lifecycle stages. Through these initial stages, we evaluate the ethical standing of our potential suppliers. By applying the standards of our Vendor Code of Conduct to these two steps, we manage the risks that can come from forming partnerships with companies that don't share our values.
3. **Vendor Onboarding and Life Management:** We don't simply "check the box" when our vendors are selected. We continue the conversation and maintain integrity through our supply chain standards. Long after selection and onboarding, we use these standards as part of our Quarterly Business Reviews with vendors to maintain responsible relationship management.
4. **Vendor Surveys:** We periodically survey our vendors to understand their programs and practices, learn more about the impacts of our supply chain, and to help uncover new ways for CyrusOne to have a positive influence on our suppliers.

VENDOR CODE OF CONDUCT

At CyrusOne, we adhere to our Core Value of commitment to ethical business practices. To reinforce this value, we use a Vendor Code of Conduct to share our standards with our business partners and facilitate ethical and professional relationships. We take the Vendor Code of Conduct seriously and have integrated it as a decision tool across all parts of the vendor lifecycle (see Strategy above).

As part of our continuous improvement process, we updated our Vendor Code of Conduct in 2021 and achieved our goal to use the Code in 100% of new vendor selection processes. In addition, we communicated our Code to all existing vendors by the close of the year. Our improved Vendor Code of Conduct can be found on our [website](#) and covers the following topics:

- **Workplace and Business Practices:**
 - No Bullying, Discrimination, or Harassment
 - Human Rights & Dignity
 - Health & Safety
 - Compensation & Benefits
 - Freedom of Association/Collective Bargaining
 - Environmental Compliance
 - Anti-Corruption & Anti-Bribery
- **Conflicts of Interest:**
 - Vendor & Supplier Relations
 - Business Entertainment, Meals, Gifts, & Favors
 - Participation in Purchasing Decisions
 - Purchases from Related Businesses

VENDOR SURVEYS

We periodically survey our vendors to communicate the importance of our vendor standards and to help us assess the maturity of our vendors' programs. Our last survey took place in 2020 with a focus on diversity and sustainability. The survey included 26 of our key global vendors totaling \$137 million in spend within the prior year. We will survey our vendors again in 2023.

VENDOR SURVEY RESULTS

- 59% track their company carbon footprint
- 45% have companywide carbon goals
- 45% have completed a product environmental life cycle analysis
- 59% have a corporate sustainability strategy
- 55% track the percentage of energy sourced from renewable energy
- 64% have a formal diversity program

HUMAN RIGHTS

Our Vendor Code of Conduct prohibits all forms of slavery, human trafficking, forced labor, and child labor as defined by applicable law. CyrusOne requires that Vendors affirmatively prohibit such human rights violations and adopt policies and procedures which comply with national and local laws on working hours, wages, benefits, and minimum working ages, and are designed to prevent human rights violations with respect to such Vendors' business operations.

All of our Tier I suppliers operate solely in developed democracies (the United States, the United Kingdom, and the European Union) with strong human rights protections, so our risk of human rights issues in our Tier I supply chain is minimal.

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SUPPLIER DIVERSITY

Diversity, equity, and inclusion within our supply chain is important to us at CyrusOne and important to our customers. To see how we integrate these values into our teammate community, please see [Responsibility to Our Teammates](#). Since we have relatively few teammates for a company with our revenue, our greatest contribution to addressing diversity, equity, and inclusion comes from our supply chain.

To track our impact on this important topic, we have set a goal to increase our partnerships with diverse and underrepresented suppliers, such as small businesses, minority-owned businesses, or women-owned businesses. In 2022, we made progress against our goals through several initiatives, including incorporating diversity reporting requirements in all request for proposals (RFPs) globally.

METRICS AND TARGETS

We measure our supply chain diversity progress by identifying the percentage of our supply chain spend that goes to certified small businesses, minority-owned businesses, women-owned businesses, or other historically underrepresented groups. Companies that are certified to multiple of these criteria are counted in each of their categories. Since the US has certification systems in place for these designations, we started our target there (US business represents 70% of our total spend).

TARGET: DIVERSE SUPPLY CHAIN SPEND

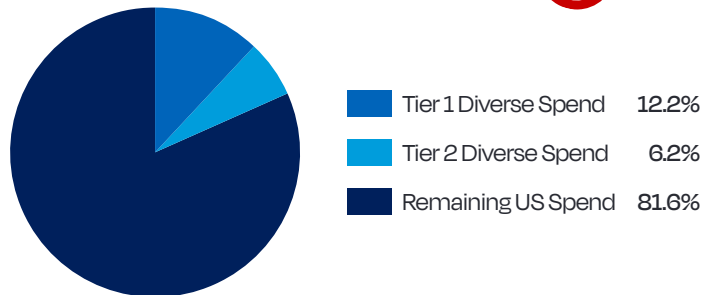
Our target is to expand our supply chain spend on small businesses or businesses owned by disadvantaged, women, veteran, minority, or disabled owners to 20% of Tier 1 and 2 US spend by the end of 2024.

METRIC: DIVERSE SUPPLY CHAIN SPEND

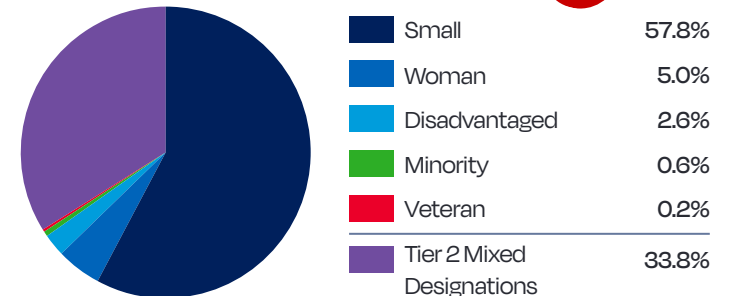
As of the end of 2022, businesses owned by disadvantaged, women, veteran, minority, or disabled owners represented 18.4% of our Tier 1 and 2 US spend.

We also track the breakdown of spending on the different business categories, shown in the chart below. Companies whose owners represent more than one of these categories (such as women veterans) are represented in multiple categories.

DIVERSE SUPPLY CHAIN PERCENTAGE



DIVERSE SUPPLY CHAIN DISTRIBUTION



CONTRACTOR OCCUPATIONAL SAFETY

Our focus on safety extends to our contractors as well. In 2022, we collaborated with several kinds of CyrusOne contractors — including construction, facility maintenance, and security — to improve transparency and safety efforts. Through this collaboration, we were able to collect valuable safety metrics from our contractors, review safety processes and programs, and form an open line of communication between the CyrusOne safety team and the contractors. In addition, we are now able to report data for both our Europe- and US-based facilities.

Information about [Employee Occupational Safety](#) and [Customer Safety](#) are covered in other parts of this chapter.

CONSTRUCTION SAFETY

Due to construction projects being a higher risk for serious injuries, supporting the safety performance of our construction general contractors is a top priority. We want to ensure that we not only get the best, but also the safest company for the job. There are three primary components to our Construction Safety Program: Prequalification, Metrics Monitoring, and Onsite Assessments.

PREQUALIFICATION

Our process begins with the prequalification phase. To be considered for a project, all general contractors must first qualify by submitting evidence of strong and measurable safety performance. The safety prequalification is conducted by our team of EHS experts and results in the company receiving an overall score. Indicators we review include the level of safety support provided to projects, insurance indicators, injury rates, and evidence of a comprehensive safety program.

METRICS MONITORING

Once a construction general contractor is hired for a CyrusOne job, they are given requirements for safety metrics reporting. Safety metrics are to be submitted to the CyrusOne EHS department monthly. These monthly metrics include a blend of both leading and lagging indicators, such as injury rates and unsafe worksite observations. These monthly metrics are aggregated and scored with a minimum score that must be maintained. If a project drops below our target threshold or we identify a negative trend, CyrusOne implements a series of interventions. These interventions are intended to signal concern, ensure alignment on priorities, and lend additional resources to the project as necessary.

ONSITE ASSESSMENTS

CyrusOne also engages third parties to perform physical safety audits at our construction sites. The purpose of the third-party audit is to verify the status of the various safety management functions of the project, highlight areas where the general contractor meets or fails to meet minimum requirements, and identify management deficiencies to be corrected. This project safety management audit covers items such as:


- Safety leadership and planning
- Accident/injury prevention and management
- Safety training and communication
- Soft tissue injury prevention
- Safety monitoring and accountability
- General liability exposures and controls

CONTRACTOR SAFETY METRICS

These metrics represent CyrusOne's global reporting for construction contractors and operations contractors (i.e., facility management and security). Definitions for each metric can be found in [Appendix 2: Primary Metrics](#).


METRIC: CONTRACTOR INJURY INCIDENTS

These metrics indicate the total count of injuries, categorized by severity. In 2022, we expanded our EHS team to include a Health and Safety Construction Manager for our Europe construction projects. The expansion of the team, along with growth in construction projects, resulted in an increase in reported incidents. This increase in construction projects is represented as an increase in Total Hours Worked used to calculate our injury rates (below). So while the total count of construction-related injuries increased in 2022, when normalized as a incidents per 200,000 hours worked, the rates actually decreased.



Performance Metric	2020	2021	2022
Number of Fatalities	0	0	0
Number of Total Recordable Cases	4	6	12
Number of Total Lost Workday Cases	1	3	5
Number of First Aid Cases	9	15	45
Number of Near Miss Incidents	1	33	89

*Data for 2021 & 2022 includes both EU and US construction contractor data, however 2020 includes only US data.




Performance Metric	2020	2021	2022
Number of Fatalities	0	0	0
Number of Total Recordable Cases	4	6	3
Number of Total Lost Workday Cases	1	2	3
Number of First Aid Cases	9	3	6
Number of Near Miss Incidents	1	1	0

*Includes data for US facility management, and EU and US data for security. EU facility management performed by employees.


METRIC: CONTRACTOR INJURY RATES

These metrics normalize the injury incidents metrics to the amount of work performed that year to arrive at an injury rate. This is shown below as the performance metric per 200,000 hours worked (the number of hours typically worked by a full-time employee in a year, commonly used for US OSHA reporting).



Incident Rates (per 200,000 hours worked)	2020	2021	2022
Total Hours Worked	678,652	771,358	2,814,871
Lost Time Injury Rate	0.29	0.78	0.36
Total Recordable Incident Rate (TRIR)	1.18	1.56	0.85

*Data for 2021 & 2022 includes both EU and US construction contractor data, however 2020 includes only US data.



Incident Rates (per 200,000 hours worked)	2020	2021	2022
Total Hours Worked	1,192,275	1,397,611	1,322,843
Lost Time Injury Rate	0.17	0.29	0.45
Total Recordable Incident Rate (TRIR)	0.67	0.86	0.45

*Includes data for US facility management, and EU and US data for security. EU facility management performed by employees.

RESPONSIBILITY TO OUR TEAMMATES

At CyrusOne, we aim to be a preferred neighbor and employer. We are committed to having a positive social impact on the communities we serve, attracting great talent, and building diverse and inclusive teams. In doing so, our efforts are focused on creating a culture of belonging, ensuring the health and safety of our teammates, and providing a work environment that promotes career development and community. We recognize that our 500+ teammates are the foundation of CyrusOne and that we are stronger when we grow together. Our leadership strives to give each teammate what they need to thrive in their careers, help them grow, and contribute at their highest potential. We aim to be an employer of choice, with passionate, innovative, and fully engaged teammates. All of our teammates operate solely in developed democracies (the United States and Western Europe) with strong human rights protections, so our risk of human rights issues related to employment is minimal.

TEAMMATE ENGAGEMENT

Our company culture fosters an environment of engagement, honesty, respect, and growth. Listening to our teammates, collecting their feedback, and identifying ways to improve the teammate experience helps to strengthen our culture. In 2021, more than 50% of our teammates participated in our Employee Engagement Survey. In 2022, we began periodic surveys to gain even more insight to the state of our teammates.

EMBRACING DIVERSITY, EQUITY, AND INCLUSION

We can most effectively support and serve our diverse customer base with a diverse and inclusive team. Our diverse workforce is a reflection of a changing world and marketplace that recognizes that there are many ways of seeing the world, solving problems, and working together. Our goal is not simply to create diverse representation within our employee population, but also to nurture an environment where all workers are treated equally and have opportunities to connect, belong, and grow. Diversity, Equity, and Inclusion (DEI) is a business imperative that helps us build and empower our future workforce while also doing our part to address societal challenges.

The pillars of our DEI strategy focus on:

- Shaping and nurturing a culture that embraces and values a diverse team
- Attracting, recruiting, and hiring diverse talent
- Onboarding, developing, and retaining diverse talent
- Community engagement to support diversity within our workforce

We recognize that proactive leadership is imperative in moving the needle concerning racial equality and social justice. Our employee-led Community, Agility, Respect, Enjoyable Workplace, Ethics, and Exceptional Service (CAREEE) Group opens channels of communication across our company and creates an environment where listening and understanding different perspectives promotes a culture of increased awareness.

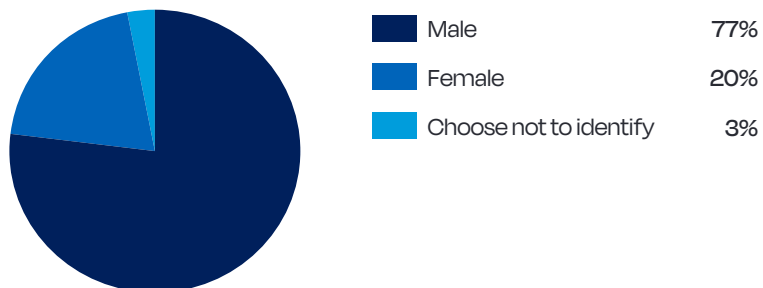




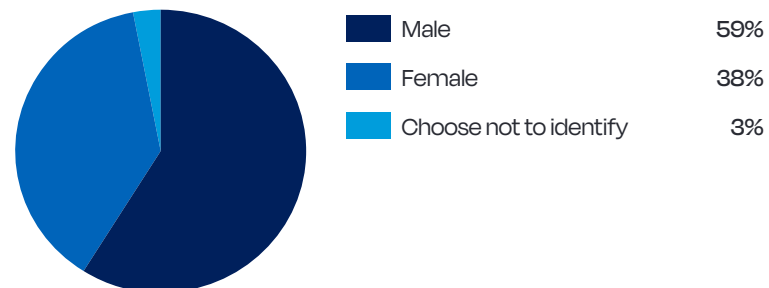
WORKFORCE METRICS DISCLOSURE

We use our metrics to track progress toward achieving our strong goals for racial and gender equity and inclusion. Our talented team boasts an average tenure of 4.5 years and experienced a 25% voluntary turnover rate in 2022 during the transition from public to private ownership.

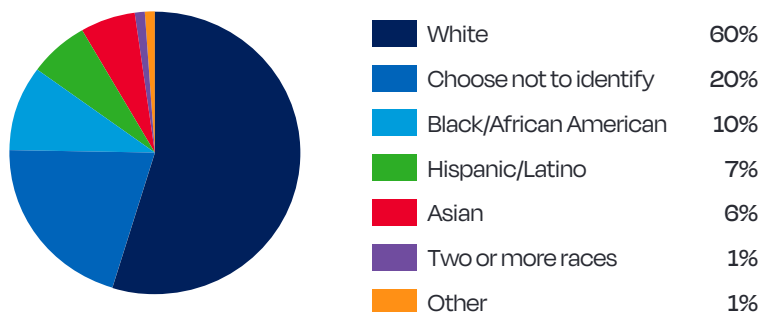
GLOBAL GENDER



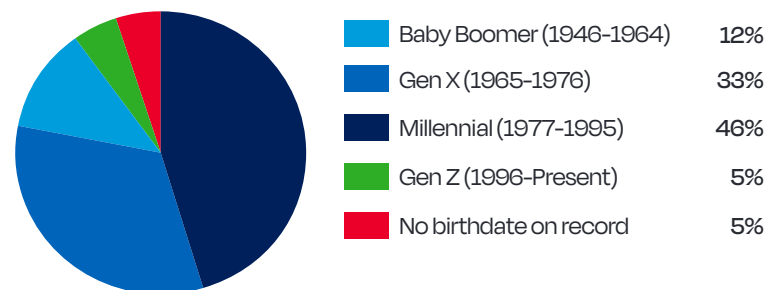
GENDER AT CORPORATE HQ (DALLAS & LONDON)



GLOBAL RACE AND ETHNICITY



GLOBAL GENERATIONS 2022



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TEAMMATE RESOURCE GROUPS

Employee-led groups are an important aspect of helping us create a diverse and inclusive work environment and helping teammates find ways to connect, belong, and grow. Recognizing that a key area of opportunity for CyrusOne is increasing talent acquisition and improving development opportunities for women, our Women's Resource Group (WRG) provides an inclusive environment that supports and encourages women to advance their skills and leadership potential through connection, networking, mentorship, collaboration, and discussion. This team is sponsored and chaired by four senior female leaders, including our Chief Financial Officer and our Chief Customer Officer.

INTERNSHIP PROGRAMS

CyrusOne has a long history of supporting internship opportunities for underrepresented groups to help individuals develop business and technology skills and build careers in the data center industry. These programs also help CyrusOne attract and recruit a more diverse talent pool.

Some examples of 2022 internships are a female engineering trainee from the Heathrow UTC and three interns supported through the Potomac chapter of AFCOM. We were also pleased to hire one of our former interns into a full-time marketing position in 2022 (see the Talent Spotlight at right).

COLLECTIVE BARGAINING

CyrusOne recognizes the right of teammates to participate in collective bargaining if they desire. As of 2022, no CyrusOne employees are represented by an independent trade union or covered by collective bargaining agreements.

TALENT SPOTLIGHT

Making a Positive Impact

"I am so grateful to work for an organization who really focuses on sustainability in everything we do."

HANNA CHEGROUCHE
Marketing Coordinator



From intern to full time employee, Hanna Chegrouche is applying what she learned in the classroom. While attending university she worked part time with the company before joining full time upon graduation. A Sustainability for Business

course was particularly impactful for her, clarifying the need for immediate action on environmental topics. Chegrouche sees businesses as having the greatest potential for this action. She wants to build a sustainable digital future which connects people to have positive impacts on the environment.

A highlight for Chegrouche was the use of reusable, 100% recyclable cardboard furniture for a recent conference event. Incorporating sustainability into elements like

conference events is a great way to demonstrate to customers that sustainability is considered in everything CyrusOne does, not just within data centers themselves. Even better, the team plans on reusing the design again at upcoming events.



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ENSURING A HARASSMENT- AND DISCRIMINATION-FREE WORKPLACE

Congruent with our company values and our policy against harassment and discrimination in the workplace, we aim to maintain a work environment free from all forms of harassment and retaliation. We affirm the fundamental principle that everyone is entitled to fair treatment and equal opportunity without discrimination on the basis of any characteristic such as race, ethnicity, color, nationality, gender, sexual orientation, gender identity, age, language, religion, creed, social status, or disability. We expect a workplace where customers, teammates, suppliers, business partners, visitors, and shareholders are treated with dignity, respect, and courtesy. All teammates are provided with transparent, respectful, and confidential avenues to bring forth concerns or workplace misconduct, including a 24/7 ethics and compliance helpline. The law and CyrusOne's policies prohibit disparate treatment on the basis of sex or any other protected characteristic, with regard to terms, conditions, and privileges of employment.

HUMAN CAPITAL

One of the ways we grow our company is by attracting, retaining, and developing talent. This section lists our efforts to offer competitive, modern benefits, and provide training and development opportunities.



TEAMMATE COMPENSATION AND BENEFITS

CyrusOne offers a Total Rewards package that is market competitive and performance-based, including salaries, bonuses, and a wide range of benefits to support our teammates and their families' health and well-being, including:

- Medical, Dental, and Vision Coverage
- Life & Accidental Death & Dismemberment (AD&D) Insurance
- Retirement Savings Plan (401k) with Company Match
- Parental Leave
- Employee Assistance Program
- Caregiver Benefits
- Health Savings Account/Flex Spending Account
- Telemedicine
- Short- and Long-Term Disability Insurance
- Fifteen Paid Holidays and a Volunteer Day
- Paid Time Off and Sick Leave
- Flexible Work Schedule

ESG-BASED COMPENSATION

As our teammates have become more informed and educated in all areas of corporate sustainability, we have integrated sustainability metrics into our annual cash bonus, including progress on renewables, water, biodiversity, recycling, safety, engagement, diversity & inclusion, and transparency.

OUR COMMITMENT TO PAY EQUITY

CyrusOne believes that our teammates should be paid fairly and equitably, regardless of their gender, race, or other personal characteristics. We benchmark and set pay ranges based on market data and consider factors such as an employee's role, location, and performance. Our teammates receive annual compensation reviews where base, bonus, and long-term incentives are all considered.

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TEAMMATE TRAINING AND DEVELOPMENT

We are committed to helping teammates reach their full potential and strengthen technical, professional, and leadership skills at every level throughout their careers. We focus on developing our teams through onboarding and assimilation training, ongoing education, experiential learning, and ongoing performance feedback.

Starting with the pandemic, our talent acquisition and HR orientation processes became fully managed remotely. This new approach strengthened our ability to convey our culture, values, office environment, and vision in a virtual manner, providing a transparent and true sense of who CyrusOne is as an employer while making new teammates feel valued and welcomed. As we return to more normal operations, we are taking those lessons learned and blending them with in-person onboarding.

Our learning management system also provides our teammates with more than 800 courses on a vast array of topics that can assist them with their ongoing professional development. This online tool includes our mandatory annual compliance training courses, which focus on topics including data protection, HIPPA privacy, emergency response plans, ethics and values, code of conduct, and Diversity, Equity, and Inclusion (DEI). In 2022, our teammates spent more than 1,900 hours completing online training. For detailed lists on specific training topics, please see the [Ethics](#), [Data Protection](#), [Business Continuity](#), and [Employee Occupational Safety](#) sections of this report.

Our leadership team reviews the performance and potential of our team each year as part of our "Talent Day" process, which includes succession planning within our organization and professional development plans for our talent.

HIGHLIGHT

Playing Ball With the Next Generation

In last year's Sustainability Report, we discussed our partnership with [University Technical College \(UTC\) Heathrow](#) and [techUK](#) to create the first Data Center UTC in the UK, with the goal of increasing the talent pool of skilled data center operators. The specialist science, technology, engineering and maths (STEM) college teaches students aged 14 to 19 and has already received international recognition having won the 'Education and Employment Project Award 2022' at the Datacloud Global Congress in Monaco earlier this year.

Our partnership with UTC Heathrow continued in 2022. Along with our continued commitment to the Digital Futures program, we also funded construction of a new multi-sports court for the school.

"The positive benefits of exercise and outdoor space to improve concentration and focus on learning as well as supporting mental health are well documented, and as such we felt compelled to improve the facilities where we could for these talented and committed young people," said Matt Pullen, CyrusOne's EVP and Managing Director – Europe.

We hope the students enjoy the new facilities for many years to come!



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EMPLOYEE OCCUPATIONAL SAFETY

At CyrusOne, we view the health and safety of our teammates as a fundamental value. Eliminating injuries requires teamwork, focus, and a continuous improvement mindset. We have aligned our practices with ISO 45001 international safety standard with six areas of focus: leadership and worker participation, planning, support, operation, performance evaluation, and improvement.

CyrusOne takes a methodical, systems-based approach to health and safety, which has resulted in world-class performance, including high productivity, high employee morale, low injury rates, low worker’s compensation costs, and a low average cost of injury.

Information about our efforts to improve [Contractor Safety](#) and [Customer Safety](#) are covered in other parts of this chapter.

STRATEGY

CyrusOne understands that as an employer, we have a duty to our teammates to create and invest in a workplace that is free from recognized hazards. At CyrusOne, we live by our CAREEE core values. As seen in these core values, we are here to improve the lives of our teammates, our communities, and our other stakeholders.

Creating a safe workplace is not only the right thing to do; there’s also a business case for safety as it helps to save the company money by lowering workers’ compensation and medical expenses, avoiding regulatory penalties and citations, and avoiding potential lawsuits. We also recognize that when teammates are working in an environment that is free from hazards, they are less likely to leave to find employment elsewhere and will be more productive at work.

All in all, we are “Safe by Design” and strive to protect and improve the health, safety, and well-being of all our teammates through our health and safety program.

RISK MANAGEMENT

As a company, we aim to achieve excellence in our health and safety program and performance through several layers of risk management and planning: our written EHS programs; training; assessments/audits; hazard recognition, evaluation, and control; and incident management.

WRITTEN PROGRAMS

CyrusOne has a wide range of written EHS Programs that serve as the backbone of our successful EHS performance. These programs help ensure that we not only follow regulatory standards, but that we also have plans in place to go above and beyond such standards. Our written programs are reviewed at least annually to make sure they are kept up-to-date. For a detailed list of our written EHS programs and additional information, please see our [Health & Safety website](#).

TRAINING

CyrusOne takes pride in our EHS training program. Along with on-the-job training, our online training courses follow best practices and local standards. In 2022, we worked to create a global EHS training program to ensure both our US and European teammates are assigned relevant EHS trainings. New training courses are available monthly and we work to ensure 100% of our teammates complete the trainings. Our EHS training program is continuously improving to ensure the information provided in these trainings is up-to-date, comprehensive, and relevant to the job being performed. For a list of EHS training topics and additional details on our training program, please see our [Health & Safety website](#).



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HAZARD RECOGNITION, EVALUATION, AND CONTROL

To prevent incidents from occurring and to maintain a safe working environment, recognizing, evaluating, and controlling hazards is of utmost importance. Our two primary tools for this are our Job Hazard Analysis (JHA) and Near Miss programs.

- **Job Hazard Analysis (JHA) Development:** Our JHA program allows for hazards to be properly identified and helps to ensure that steps or procedures are put into place to mitigate such hazards. With potential hazards being mitigated through JHAs, many incidents and near misses can be avoided. Our JHAs are continually being reviewed and expanded to ensure that the information remains up to date for the tasks performed by our teammates.
- **Near Miss Program:** Our Near Miss Program helps to proactively identify potential hazards before an injury event ever occurs. Available to all CyrusOne teammates, this program allows for near misses to be easily reported and documented online. In analyzing and correcting near misses, we can identify areas that need improvement and prevent incidents from occurring.

INCIDENT MANAGEMENT

All EHS related events are reported and documented, whether it is an injury, environmental event, property damage, or a general liability case. All stages of the incident investigation process are fully documented through our enterprise safety information management system. For more details on our Incident Management process, please see our [Health & Safety website](#).

FACILITY ASSESSMENTS

To ensure compliance of our facilities, each of our data centers undergoes an annual in-depth EHS assessment led by our team of experts. Conducting these assessments annually allows us to see the progress and progression in our data centers when it comes to overall EHS performance. These assessments help to ensure that our facilities are both in compliance with local standards, such as 29 CFR 1910, and follow all CyrusOne's health and safety programs and policies. This also is in alignment with the ISO 45001 "Plan Do Check Act" cycle, giving us the ability to

TALENT SPOTLIGHT
Building a Safety Culture

"When a workplace injury happens to you, personally, you learn to take safety to heart."

SARAH PROVAZEK
EHS Specialist



After an injury in a prior job that would have likely been prevented with proper safety training, Sarah Provazek went back to school to earn her Masters in Occupational Safety. Her friends might ask her "Are you a safety cop, walking around and catching people being unsafe?", but to

Provazek, occupational safety is so much more. It's about building the systems and culture to get to the point that everyone is a safety leader because they have the training and motivation to make their own workplaces safer.

Provazek is particularly proud of the comprehensive safety training her team worked on in 2022 for all CyrusOne facilities in Europe. Previously, EHS and safety trainings varied from country to country. The new standardized training goes above and beyond all applicable national regulations and provides all European team members easy access to the information they need to stay safe on the job.

check our performance and act to improve it. Not only do we conduct our assessments to confirm compliance, but these assessments serve as an opportunity to discover best practices that can be shared across the company. To learn more about our assessment process, please visit our [Health & Safety website](#).

METRICS AND TARGETS

These metrics measure the health and safety outcomes for all CyrusOne teammates. A description of each metric and formula is found in [Appendix 2: Primary Metrics](#). Metrics for contractors can be found in the [Contractor Safety](#) section.

METRIC: EMPLOYEE INJURY INCIDENTS

These metrics indicate the total count of injuries categorized by severity.

METRIC: EMPLOYEE INJURY SEVERITY


These metrics indicate the severity of the metrics reported above, as measured by how many days an employee spends away from work recovering or on restricted duty to allow healing at work.

METRIC: EMPLOYEE INJURY RATES

These metrics normalize the metrics above to the amount of work performed that year to arrive at an injury rate. This is shown as the performance metric per 200,000 hours worked below (the number of hours typically worked by a full-time employee in a year, commonly used for US OSHA reporting).


METRIC: CHEMICAL SPILLS

These metrics indicate the spills of chemicals (including fuels) that could impact local health or the environment.




Employee Injury Incidents			
Performance Metric	2020	2021	2022
Number of Fatalities	0	0	0
Number of Total Recordable Cases	1	4	2
Number of Lost Workday Cases	0	1	2
Number of Restricted/Transfer Duty Cases	0	0	0
Number of Other Recordable Cases	1	3	0
Number of First Aid Cases	0	1	2

Scope: All global CyrusOne employees, including full- and part-time employees.



Employee Injury Severity			
Performance Metric	2020	2021	2022
Number of Days Away from Work	0	36	68
Number of Restricted/Transfer Duty Days	0	116	163

Scope: All global CyrusOne employees, including full- and part-time employees.



Employee Injury Rates			
Incident Rates (per 200,000 hours worked)	2020	2021	2022
Total Hours Worked	860,942	911,990	970,676
Lost Time Injury Rate	0	0.22	0.41
Days Away Restricted or Transferred (DART) Rate	0	0.22	0.41
Total Recordable Incident Rate (TRIR)	0.23	0.88	0.41

Scope: All global CyrusOne employees, including full- and part-time employees.

Chemical Spills			
Performance Metric	2020	2021	2022
Reportable Spills with Environmental Impact	0	0	0
Reportable Spills without Environmental Impact	1	0	0

Scope: Includes major spills that require reporting to local agencies, whether they resulted in environmental impact or not.

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RESPONSIBILITY TO OUR CUSTOMERS

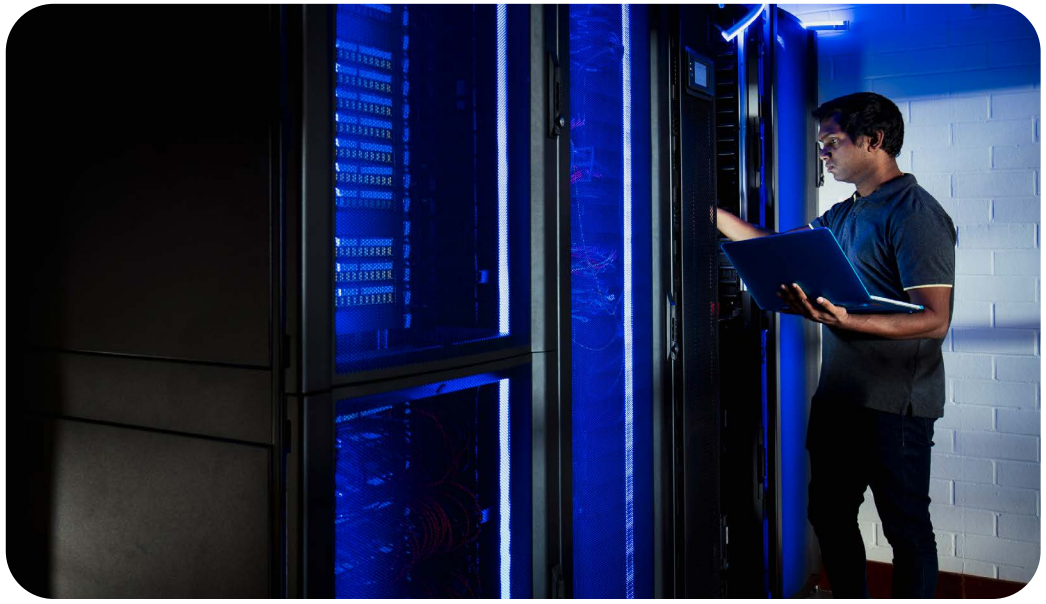
CyrusOne is a trusted partner to the world’s leading companies and we work with each of our customers to improve their operations, economic performance, and sustainability goals. Our responsibility to customers begins with delivering a great product with great customer service. But because we are part of our customers’ supply chains, we recognize we also have a responsibility to help them move their sustainability and social goals forward while ensuring their safety while they are at our facilities.

CUSTOMER SAFETY

Just as we prioritize the safety of our teammates (see [Employee Occupational Safety](#)) and partner with contractors to work safely at our sites (see [Contractor Safety](#)), our focus on safety extends to our customers who share our colocation spaces. To provide shared guidelines, we’ve developed a [Customer Safety Handbook](#). This Handbook outlines general safety rules, as

well as topic-specific considerations, such as safe ladder use, electrical safety, fire prevention, and material handling. These rules all have one thing in common: they are there for the safety of all who work in or operate our data centers.

In 2022, we created a [safety video for customers and visitors](#) to view prior to visiting or working in our data centers. As there are various safety hazards that are seen in data centers, CyrusOne wants to ensure that all customers and visitors are well-informed of these hazards and how they can stay safe when visiting or working in our data centers. The safety video highlights general safety information and best practices for customers and visitors to follow when inside our data centers.



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CUSTOMER SATISFACTION

At CyrusOne, we put the experience of our customers at the center of everything we do. Our highly responsive team is committed to providing a trusted layer of service and counsel, and we collaborate with our customers to co-create the right solutions to meet their specific needs. One of the foundations of our approach is listening to and acting on client feedback. Our approach consists of:

1. **Surveying customers for feedback:** We regularly survey our customers for feedback on our service and support and occupant comfort at our facilities, among other topics.
2. **Investigating and resolving issues:** When customer feedback identifies an issue, we take steps to investigate the root causes and make improvements to address the issue.
3. **Communicating progress:** We follow up with customers on the improvements we make and to demonstrate their feedback is valued.

In addition to our regular ticket-based satisfaction surveys, our last comprehensive customer survey was conducted in 2021. During this survey, more than 2,300 individuals were invited to provide feedback to CyrusOne on aspects including account management, billing and invoicing, facility operations, our Global Service Desk, physical security, and service delivery. This portfolio-wide survey generated valuable insights from 162 of our customer accounts.

HIGHLIGHT

Special Delivery: Customized Customer Sustainability Reports

We've been tracking our major environmental impacts such as energy use, carbon emissions, and water consumption for several years and reporting them here, in our Corporate Sustainability Report. We often receive requests from our customers for a summary of their portion these impacts. Due to the complexity of our data centers, we previously handled these requests on a case-by-case basis. However, with the upcoming US SEC greenhouse gas reporting requirements for public companies, we decided it was time to offer this information to our customers on an annual basis.

Our old process of gathering sustainability data wouldn't have allowed us to provide our customers the data they need until April, long after the proposed SEC reporting deadline. To support our customer-first approach, we redesigned our reporting process from the ground up to create a comprehensive Customer Sustainability Report which we sent to all customers for the first time starting in January 2023, covering data from calendar year 2022.

Our Customer Sustainability Report not only helps our customers understand how their business with us contributes to their impacts, but helps hold us accountable for our own improvements. We often say that helping our customers reach their goals is one of the most important aspects of our own sustainability program. This report is a strong step in that direction. We hope the level of transparency we have provided them will help our customers to increase their own transparency on these issues and to require similar disclosure from other links in their supply chain.

RESPONSIBILITY TO OUR COMMUNITIES

We manage more than 50 data centers around the world. Each one of them operates within a local community, where we do business and where our teammates live, work, and raise their families. While we are a global company, we must also think locally, taking responsibility to positively impact the communities where our facilities are located. When we take time to volunteer, contribute to a local organization, or just meet with our neighbors and get to know each other, we are contributing to the overall wellness and connectedness of our communities.

STRATEGY

BUILDING NETWORKS OF RESILIENCE

At CyrusOne, building resilience into our business is a core competency of our teammates and crucial to our success. We believe we have a great deal to contribute by extending our efforts outward into our local communities.

Specifically, we intend to develop volunteering and giving initiatives and target our philanthropic support in three specific areas where we can help build Networks of Resilience:

1. **Building a resilient workforce:** To give our teammates and contractors the support and inclusive environment they need to adapt to changing business and world conditions, and to nurture new talent through internships and training programs.
2. **Building resilient community networks:** To help our communities weather unexpected shocks and downturns, such as those that have been impacted by natural disasters or are facing food insecurity.
3. **Building resilient ecological networks:** To give communities (both human and wildlife) access to water and a healthy, biodiverse habitat and to minimize the effects of climate change.

Our strategy builds upon work that has been in motion for many years. In 2023, our team will begin the work of activating our new community investment strategy in a broader way.

COMMUNITY ENGAGEMENT

BEING A GOOD NEIGHBOR

We recognize that our operations can have both positive and negative impacts on the communities in which we operate. While we strive to make an overall positive impact, at the bare minimum, we seek to do no harm. We listen to our neighbors and community stakeholders, and take action on their feedback if and when our operations are affecting their lives. When we get complaints, such as for noise coming from our operations, we make it a point to engage with neighbors rather than retreating behind the letter of the law. We listen to their point of view and then work to remedy issues so we will continue to be welcome members of the community.

TEAMMATE GIVING AND VOLUNTEERISM

Community is central to our company CAREEE core values. We believe in giving back to the communities in which we do business. Each year, our teammates are provided eight paid hours for volunteering within their respective communities. Through company-sponsored events and on their own, many of our teammates make time to work alongside our neighbors to make the community a better place.

This year, CyrusOne teammates participated in several events to support the Community Partners of Dallas (CPD), a nonprofit that addresses the needs of abused children. They packed school supplies and backpacks for students in the Dallas Independent School District and supported the annual Toy Drive, among other events.

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CORPORATE GIVING

Every year, CyrusOne and its teammates support a variety of charities and organizations across the country, including partnerships, fundraising and food drives with North Texas Food Bank and Houston Food Bank. CyrusOne is also involved with the Knowledge is Power Program, Carry The Load, Girl Scouts of the USA, Midtown Educational Foundation, Light The Night Cincinnati, Girlstart – STEM Education, Katy Trail 5K, March of Dimes, Big Brothers Big Sisters Community Partners of Dallas, Cotes de Coeur (American Heart Association) and Relay For Life.

Some highlights of our 2022 corporate giving include:

- **The CyrusOne Leadership and STEM Achievement Scholarship** at Allen High School in Allen, Texas: This scholarship is awarded to students who have demonstrated strong academic and leadership skills, and are planning a career in a STEM-related field.
- **Louden County Toys for Tots:** CyrusOne donated 10,000 square feet of office space for storage and distribution for the Loudoun County Toys for Tots 2022 toy drive.
- **Data Center Coalition Blood Drive:** CyrusOne team members joined with others in our industry to roll up our sleeves for the #DataCentersSleeveUp blood drive campaign, organized by the Data Center Coalition.
- **Slough Foodbank:** Our London area team members joined with Phoenix ME Limited to make regular donations of food to the Slough Foodbank.



HIGHLIGHT
Feeding People and Pollinators in Virginia

The data center industry may be a high-tech field, but sometimes we like to go back to the basics! We've partnered with Host in Ireland's DCs for Bees program for several years now, and in 2022 we were able to collaborate with them on a project far from Ireland but where we have a lot of interest, Northern Virginia. A team of CyrusOne volunteers worked with other DCs for Bees members at the JK Community Farm in Purcellville, VA to fund and build 25 new raised beds to grow pollinator-friendly crops.



The farm, which donates 100% of what it grows to local food pantries, estimates that the new beds will allow it to provide an additional 1,000 meals annually to families facing food insecurity. The crops will also provide food for bees and other pollinators, which are facing many challenges throughout the globe. This project allowed us to support not only our responsibility to our communities, but also our commitment to improving habitat and biodiversity where we operate.

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APPENDIX 1: METHODOLOGY

MATERIALITY ASSESSMENT

PROCESS

We surveyed all members of our Sustainability Working Group, select experts in the company who could represent specific topics or stakeholders, and four external experts. Based on guidance from GRI and this survey information, we determined if a topic was 1) important to stakeholders and 2) impactful to the environment or society. These two factors then determine what we do and do not report.

MATERIALITY

To determine what could be considered *material* for reporting, we had to answer three key questions: *what*, *where*, and *when*? For *what*, we looked across industries to determine what impacts our industry contributes to most. In *where*, we considered the locations in which we operate to ensure that we are sensitive to local or regional issues. Finally, for *when*, we assessed topics both as they are now and as they are projected to be in 10-20 years.

IMPORTANCE TO STAKEHOLDERS

To determine the importance of a topic to stakeholders, we evaluated the degree to which each type of stakeholder has conveyed concern about each topic. The scores were then weighted to reflect our strategic focus on the customer. For the first assessment, stakeholders were defined as customers, investors, and communities. In the future, we may try to include additional stakeholders, such as teammates (employees), non-governmental organizations (NGOs), or suppliers.

IMPACT ON THE ENVIRONMENT OR SOCIETY

To determine our impact on the environment, we again asked three questions: what is our impact on human health and habitat, what is our impact on scarce resources, and what is our impact on climate? The scores were then weighted to provide a final impact score. For impact on society, we relied on our external experts to weigh the impact on society against a variety of factors.

CLIMATE RISK

FUTURE FLOOD RISK ASSESSMENT

US PROPERTIES

All US properties were assessed with the [Flood Factor Tool](#). Based on the property's address, the tool issues a score of 1-10 (10 being the maximum risk) indicating the probability of a flood occurring and the depth of the flooding (i.e., a higher score indicates that the property is either more likely to flood, the flood height will be higher, or both). A full description of its methodology can be found [here](#).

If the tool was unable to locate the property from its address, we used a nearby location. These locations were never more than a couple of buildings away or across a road. This occurred for 18 properties, the majority of which scored a 1 (*low risk*). Scores of 1-2 were categorized as *low risk*, scores of 3-5 as *low-medium* and 6-7 as *medium-high risk*. No scores were in the 8-10 *high risk* category.

UK PROPERTIES

All UK properties were assessed using UK government [Flood Risk Tool](#). The tool assesses an area's flooding risk from rivers and sea as well as from surface water. Reported risk is a function of the probability of flooding and the consequences of flooding (be that environmental, economic, human health, etc.). The tool's full methodology can be found [here](#). All UK properties scored *low* or *very low* in both flooding risk from rivers and sea, as well as from surface water, and were therefore included in the report's *low risk* bucket.

REMAINING PROPERTIES

The remaining properties were evaluated using country-specific reports and tools. The Amsterdam property was assessed with this [governmental report](#). The Dublin property utilized this [online tool](#). The Frankfurt properties utilized this [study](#) from 2010 and this study from 2016. For each of these properties, the method was unable to tie a level of risk with a particular address. Rather, the general location of the property (often the city or region) was used to match the granularity of the study. All of these

sites were in the low categories of risk from their respective evaluation and were therefore included in the report's *low risk* bucket.

CARBON PRICING RISK ASSESSMENT

To cover the range of likely possibilities, we looked at three carbon price scenarios. The first is based on a key customer's current self-imposed internal carbon price of \$15/ton. This is the *Voluntary Scenario*. [Economic estimates](#) conclude that in order for countries to meet the commitments to the Paris Accord through carbon taxes, they will need to impose carbon taxes in the range of \$50-100/ton by 2030. Based on this, we selected two other scenarios we named *Paris low* and *Paris high*.

- *Voluntary* price: \$15/ton
- *Paris low* price: \$50/ton
- *Paris high* price: \$100/ton

It is highly unlikely that a carbon tax would be levied directly on CyrusOne; instead, it will likely increase the cost of energy and raw materials. We analyzed the impact of these increases on CyrusOne's business activity, including both facility construction and operations. We then applied these impacts on a per-facility basis to compare the potential energy price increases to each facility's current electricity price. Then, we considered the different styles of customer contracts to understand, at the facility level, how much the carbon price would affect (1) our direct expenses, and (2) our competitive position (by passing cost increases through to our customers). This per-facility analysis also gave us a way to calculate the benefit of new renewable electricity contracts in reducing carbon pricing risk.

ENERGY

ENERGY SOURCE SCOPING

Our operational energy-use calculations include four sources:

1. CyrusOne electricity for IT equipment support and common areas
2. Customer electricity for their IT equipment in our data halls
3. Natural gas for comfort heating (only used at some facilities)
4. Diesel for emergency backup generation at all facilities

These data are combined into a common unit, kWh (using standard conversion factors for natural gas and diesel from the European Framework Initiative for Energy & Environmental Efficiency in the ICT Sector). The energy-use data in this report covers all global facilities where we exercise operational control. Facilities that we do not include are those operated by our customers (such as San Antonio (SAT4)) or the few leased facilities where we do not have operational control (such as London (LON99) and our HQ office suites). We anticipate that all directly managed facilities built in the future will be included in our scope of operational control, and we will clearly state any exceptions to this rule.

ENERGY INVENTORY

The table below summarizes how we group different energy types into our metrics.

Energy Inventory Categories	
Fuels	
Non-renewable	Diesel (1 US gallon = 40.8 kWh) Natural gas (1 therm = 29.3 kWh) Hydrogen from nonrenewable sources
Renewable	Biodiesel, renewable diesel, biogas, green hydrogen
Electricity (CyrusOne support equipment AND customer IT loads)	
Non-renewable, Zero Carbon	Thermoelectric from nuclear
Non-renewable, Fossil Fuel	Thermoelectric from coal, oil, gas
Renewable	Solar, wind, hydroelectric, geothermal
Renewable Electricity Procurement Types	
Direct	PPA, Green Tariff, retail product, direct generation, VPPA
Offsets	Unbundled RECs/Guarantees of Origin and other Energy Attribute Certificates (both National and Regional)
Other Imported Energy	
Non-renewable	Offsite steam, district heating, district chilled water, etc. from carbon-emitting energy sources
Renewable	Above, generated from renewable energy

CLIMATE IMPACT

GREENHOUSE GAS INVENTORY

Our greenhouse gas (GHG) inventory accounts for greenhouse gas emissions from electricity, diesel, natural gas, and refrigerant loss. This includes direct emissions from our operations (Scope 1), purchased electricity (Scope 2 for both our own operations and our customer IT equipment), and indirect emissions, including those from our energy supply chain, employee travel, construction, and customer-operated data centers (Scope 3). Our Scope 1 emissions come from burning diesel in backup generators, natural gas in facility comfort heating, and refrigerants lost to atmosphere. We do not purchase any Scope 2 energy other than electricity (such as district heat or chilled water).

The GHG inventory data in this report covers all of our global facilities where we exercise operational control. Facilities that we do not include are those operated by our customers (such as San Antonio (SAT4) or the few leased facilities where we do not have operational control (London (LON99) and our HQ office suites). We anticipate that all directly managed facilities built in the future will be included in our scope of operational control, and we will clearly state any exceptions to this rule.

Following the WRI Greenhouse Gas Protocol, our GHG Inventory evaluates the major greenhouse gases: carbon dioxide, methane, nitrous oxide, refrigerants, and sulfur hexafluoride. Sulfur hexafluoride was evaluated and does not apply to our operations. All emissions are reported in carbon dioxide equivalents – based on the global warming potential of each gas relative to carbon dioxide, as determined by the US EPA.

Our earliest year of available complete data is 2018, which also serves as our baseline year (targets such as our Science-based targets may have other baseline years, which is stated in that section of the report).

SCOPE 3 ESTIMATES

Our Scope 3 emissions are carbon emissions from CyrusOne's indirect sources such as upstream supply chain activities or downstream customer activities. Below are our Scope 3 sources and the methodology that we used to calculate the carbon emissions from each:

- **Construction Materials (Capital Goods):** Estimated from industry averages for concrete, steel, and other metals.
- **Fuel and Energy-Related Activities:** Estimated using industry averages for fuel extraction, refinement, and transport (Well To Tank or WTT factors), as well as electrical transmission and distribution (T&D factors).
- **Business Travel:** Estimated using WRI Mobile Source Tool and estimates of company flights per teammate per year.
- **Employee Commuting:** Estimated using WRI Mobile Source Tool with company-wide estimates of miles commuted by teammates in passenger vehicles.
- **Customer-Operated Facilities (Downstream Leased Assets):** Measured from customer-operated (indirectly managed) facilities that report energy data.

WATER

WATER RISK ASSESSMENT

Our Water Risk Assessment takes a three-step approach to understanding CyrusOne's specific risks and opportunities associated with water supplies. In our assessment, we evaluate three views into the relationship between water and CyrusOne's operations:

1. **Regional Water Stress:** The balance of regional supplies of water versus regional demand for water, both now and with projections for the future (2030 and 2040). This stress is shared by all companies that operate in the region.
2. **Facility Water Use:** How much water CyrusOne facilities use in a year.
3. **Facility Water Risk Exposure:** The combination of Regional Water Stress and Facility Water Use, indicating how much exposure each CyrusOne facility has to the regional risk.

Regional Water Stress helps us understand which regions are now or will soon be high risk, which is useful for both current facilities and site selection for new facilities. Understanding Facility Water Use can help us focus our attention on the current largest users of water and identify where improvements in water efficiency would be most beneficial. Finally, the Facility Water Risk Exposure identifies which facilities use significant amounts of water in highly water-stressed regions. Some CyrusOne facilities in high-stress regions do not use much water and thus are not exposed to that region's risk, while other sites might use significant amounts of water in regions where water is plentiful. Neither of these is of particular concern. Instead, it is important to identify high-use sites in high-stress regions.

REGIONAL WATER STRESS

Because water stress varies greatly by location, it is important to understand both the current and projected future water stress at each site. The World Resources Institute (WRI), a global research organization focused on sustainable management of natural resources, provides the definitive tool for evaluating water risk in its [Aqueduct Water Risk Atlas](#). In WRI's words, "The Atlas uses a robust, peer-reviewed methodology and the best available data to create high-resolution, customizable global maps of water risk." It is currently in version 3.0.

FACILITY WATER USE

To perform a water risk assessment, we first needed to know how much water is consumed by CyrusOne sites. This was gathered from utility bills or reported by facility managers. Water is reported by different water agencies in different units. The conversion factors used for each unit of measurement are listed below.

Water Conversion Factors		
Abbreviation	Unit of Measure	Gallons per Unit
gal	gallons	1
CCF	hundred cubic feet	748
HCF	hundred cubic feet	748
kgal	thousand gallons	1,000
AF	acre-feet	325,851
L	liters	0.264
KL	kiloliters	264
m ³	cubic meters	264

FACILITY WATER RISK EXPOSURE

The next step was to analyze the intersection between water stress and water consumption for each location (the water risk exposure). We brought these factors together to create a heat map of locations showing the intersection of regional water stress (current and future) and CyrusOne’s facilities’ water withdrawal in total gallons.

SCOPING

Our 2022 Water Risk Assessment evaluates the current water stress for all of our facilities and the predicted water stress in 2030 and 2040. We also calculate total water use at the facilities for which we have data (>90% of building area) to determine each site’s exposure to regional water stress. For our leased facilities where water use data is not available (<10% of building area), we can only monitor the regional stress, not the facility-specific risk. For this assessment, we consider all water withdrawal for our facilities regardless of the end use of the water (evaporation or discharge).

BIODIVERSITY

ENVIRONMENTAL IMPACT ASSESSMENTS

Environmental Impact Assessments are performed while evaluating a property for purchase. These are conducted to the standards of the countries in which CyrusOne operates, but all share similar components. In the United States, for example, we start with a Phase I Environmental Site Assessment (“Phase I ESA”). The intent of a Phase I ESA is to assess whether current or historical property uses have impacted the soil or groundwater beneath the property and could pose a threat to the environment and/or human health.

A Phase I ESA typically includes the following:

- A site visit to observe current and past conditions and uses of the property and adjacent properties.

- A review of federal, state, tribal, and local regulatory databases including, but not limited to, underground storage tanks (USTs), aboveground storage tanks (ASTs), known or suspected release cases, the storage of hazardous substances, and disposal of hazardous wastes including petroleum products and institutional and engineering controls.
- A review of historical records, such as historical aerial photographs, fire insurance maps (Sanborn maps), historical city directories, and historical topographic maps.
- A review of state and local agency records including, but not limited to, state environmental agencies, Building Departments, Fire Departments, and Health Departments.
- Interviews with current and past property owners, operators, occupants, or others familiar with the property.

If the Phase I ESA identifies a recognized environmental condition, we proceed to a Phase II Environmental Site Assessment to collect soil, groundwater, and soil vapor samples from the subsurface to analyze for the presence of contamination.

PROTECTED AREAS ASSESSMENT

After a property has been purchased and is in operation, we monitor for changes to surrounding areas to check if any areas have become protected since purchase. This assessment is conducted annually using map searches for each facility. Changes in the designation of surrounding areas lead to deeper research as to the nature of the change, whether it represents a protected habitat of any sort, and whether we need to make any adjustments to our operations to protect that habitat.

APPENDIX 2: PRIMARY METRICS

As described in the [Introduction](#), throughout this report, we share the results of our primary metrics that we used to measure our progress against our goals. This appendix provides additional detail about exactly how we arrived at these metrics and our reasoning for them. We also clarify scoping so it is clear what is included in these measurements, what is not, and why. While the actual results are in the relevant chapters, we hope that this can become a resource for our industry and help our customers and other stakeholders compare apples to apples.

BUILDING FOR SUSTAINABILITY METRICS

This section provides additional detail about the precise metrics and scoping for our primary metrics for building design and construction.

METRIC: DESIGN PUE

Power Usage Effectiveness (PUE) is the ratio of a data center's total electricity usage to the electricity delivered to IT Equipment. For more information about PUE, see Power Usage Effectiveness under Wet vs. Dry Data Centers, below.

We make a distinction between a facility's Design PUE (the idealized PUE of a facility running at full capacity based on its design and assumptions about customer IT Equipment) and its Operating PUE (the measured PUE of a facility in a given year based on actual conditions). Operating PUE will always be higher (worse) than Design PUE because, to maintain redundancy and flexible capacity, colocation data centers are never run at full capacity.

METRIC: PERCENTAGE OF NEW DATA CENTERS WITH WATER-FREE COOLING

To focus our efforts on water-free cooling at new data centers, we track the percentage of new data centers each year that can operate without consuming water for cooling. Some facilities may be hybrid facilities with the option of consuming water but can fully operate without it — these contribute toward improving this metric since they limit our risk exposure to increased regional water stress without costly retrofits.

ENERGY METRICS

This section provides additional detail about the precise metrics and scoping for our primary metrics for energy efficiency.

MODERN VS. LEGACY DATA CENTERS

We group our facilities into two categories: *modern* facilities, which we designed and built based on our design standards or acquired and are otherwise consistent with our design standards; and *legacy* facilities, our older facilities that we purchased or built before our modern standards. We make this distinction because the energy and carbon use from our *modern* facilities in operation give a more accurate estimate of the future impact from facilities that are still in development and construction since they are built to the same standard. This distinction between *legacy* and *modern* facilities also guides our strategy for improving existing facilities (see [Energy Efficiency](#)).

WET VS. DRY DATA CENTERS

Among our data centers, some consume water for cooling (e.g., using water towers or evaporative coolers), which we term *wet* facilities; and others consume no water for cooling, called *dry* facilities. Because energy metrics (like PUE, below) treat water as “invisible,” we make the distinction between facilities that rely on increased water consumption to reduce their PUE and those that achieve it without water. The majority of our *modern* data centers (including *pre-built-out* and under-development sites) are capable of providing cooling without consuming water and thus are categorized as *dry*. We have a small number of *modern* facilities that use evaporative cooling (*wet*).

Using the categories above, we report on the following metrics for energy:

- Absolute Energy Consumption
- Power Usage Effectiveness (PUE) (total kWh/IT kWh)
 - Operating PUE
 - Design PUE
- Building Energy Intensity (MWh-eq/ft²)
- Electricity Procured as Renewable (%)
- Facilities with Renewable Option (%)

METRIC: ABSOLUTE ENERGY CONSUMPTION

Our operational energy use calculations include four sources: (1) CyrusOne electricity for IT equipment support and common areas, (2) customer electricity for their IT Equipment in our data halls, (3) natural gas for comfort heating (only used at some facilities), and (4) diesel for emergency backup generation at all facilities.

These data are combined into a common unit for aggregation (kWh). We use standard conversion factors for natural gas and diesel (from the European Framework Initiative for Energy & Environmental Efficiency in the ICT Sector). For more detail about the scope and methods, see Energy Inventory in [Appendix 1: Methodology](#).

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METRIC: POWER USAGE EFFECTIVENESS (PUE)

Power Usage Effectiveness (PUE) is the ratio of a data center's total electricity usage to the electricity delivered to IT equipment. This extra, non-IT power is used to operate the cooling, electrical distribution, lighting, and other mechanical systems necessary for IT equipment operation. Since CyrusOne doesn't make any decisions about the efficiency of our customers' IT equipment, we focus on how efficiently we can support their cooling and power needs.

Using the standard calculations developed by [The Green Grid](#), these measurements determine how efficiently we provide support services to our customers' IT equipment. PUE measures the total energy from a facility (total energy) divided by the energy used by customer IT equipment (IT energy). Thus, PUE has a theoretical minimum of 1.0 total kWh/IT kWh (indicating that no energy is used to provide cooling and energy distribution to the IT equipment). When taking an average of this metric, we only include *built-out* facilities that we manage directly to avoid the volatility of *pre-built-out* facilities and those out of our operational control.

Because these *administrative* areas are typically very minor contributors to the site's total energy usage, many CyrusOne facilities do not have submetering for them, so we do not subtract this *administrative* energy from the PUE. This has the effect of conservatively overestimating our PUE.

PUE is a helpful metric because it scales with customer demand for power, which predicts the amount of heat generated by IT equipment. This heat is the primary driver of our power usage to provide cooling.

The challenge with this metric is that water is "invisible" because it can be used to lower PUE without recognizing the impact of water consumption. This is why we make a distinction between *wet* and *dry* data centers. PUE is also subject to volatility based on how much of a data center's capacity is being used. This is why PUE must be considered in conjunction with Building Energy Intensity (below) to see the full picture.

METRIC: OPERATING POWER USAGE EFFECTIVENESS (PUE)

We make a distinction between a facility's Design PUE (the idealized PUE of a facility running at full capacity based on its design and assumptions about customer IT equipment) and its Operating PUE (the measured PUE of a facility in a given year based on actual conditions). Operating PUE will always be higher (worse) than Design PUE because, to maintain redundancy and flexible capacity, colocation data centers are never run at full capacity. For more information about Design PUE see [Building for Sustainability](#).

METRIC: BUILDING ENERGY INTENSITY

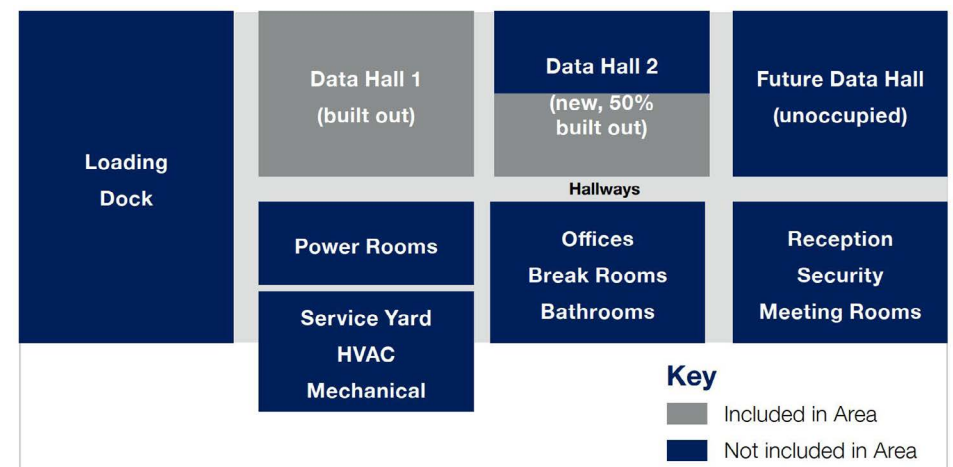
Building energy intensity describes the energy use per *built-out* colocation building area of our facilities. We measure building energy intensity in megawatt-hours per square foot (MWh/ft²). This metric includes the total energy consumed by the facility, including electricity used for infrastructure, electricity supplied to customer IT equipment, and fuels (diesel and natural gas).

Within our data centers, the vast majority of the environmental impacts originate, directly or indirectly, from IT equipment activity in the data halls. Because of this, we measure business activity for these metrics in *colocation square feet*. "Colocation" refers to the IT equipment housing space (data halls) and does not include office space, common areas, or support infrastructure (power rooms, service yard, HVAC equipment). Office space and common areas do draw minimal amounts of power, but they are insignificant compared to the data halls, so including them would dilute our measurements. Even though the support infrastructure area (chillers, air handlers, power transformers, etc.) does draw power, it is done in service to the data halls, so we find the colocation building area to be the best denominator of our intensity metrics. Furthermore, we only include facilities that we directly manage (removing the tenant-operated/indirectly managed facilities from both our energy and building area metrics).

To determine our company-wide averages, we further focus our metrics on *built-out colocation square feet*. "Built-out" means that a customer has not only rented the space but has also installed their IT equipment and begun to draw power. In the first year or two of operation, data centers require energy for start-up activities and may have low occupancy as customers plan their move-in and begin operations. This can result in volatile metrics that skew averages (such as a facility with a PUE of 233 instead of a typical 1.5). These facilities are referred to as "*pre-built-out*," and we do not include them in averages (though they are included in gross totals). Once they become *built-out*, we include them in averages without negatively impacting our data quality.

This fictitious data hall floor plan illustrates which building area is included in the denominator of this building intensity metric.

The challenge with these metrics is that, within our portfolio, some facilities are designed to provide greater than average power density (W/ft²) to customer IT equipment in order to support high-performance computing (HPC). *Modern* facilities tend to support a higher design power density than *legacy* facilities. Of course, how our customers use this design capacity is up to them, and they often do not draw the full power available to the space. So, if the energy intensity of a facility decreases, it could be because the facility became more efficient due to an upgrade or good management, or it could mean that customers changed their computing power needs. This is why energy intensity must be considered in conjunction with PUE to see the full picture.

FACILITY MAP FOR BUILT-OUT COLOCATION BUILDING AREA SCOPING

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METRIC: PERCENTAGE OF ELECTRICITY PROCURED AS RENEWABLE BY CYRUSONE

We measure the amount of energy that we procure as 100% renewable as a percentage of all the electricity that we purchase (including electricity delivered to customers). This includes mechanisms like retail green power offerings, Power Purchase Agreements (PPAs), Virtual Power Purchase Agreements (VPPAs), and the like.

METRIC: PERCENTAGE OF ELECTRICITY PROCURED AS RENEWABLE BY CUSTOMERS

We also measure the renewable electricity that we have confirmed has been procured by our customers to cover their IT equipment and cooling electricity in our facilities (which we include in our Scope 2 reporting) as a percentage of all the electricity that we purchase.

METRIC: PERCENTAGE OF ELECTRICITY PAIRED WITH RENEWABLE CERTIFICATES

We also measure the amount of energy that we pair with unbundled Renewable Energy Certificates (RECs), Guarantees of Origin (GOs), or other certificate mechanisms as a percentage of all the electricity that we purchase (including electricity delivered to customers).

METRIC: PERCENTAGE OF FACILITIES WITH RENEWABLE OPTION

This measures how many of our facilities can offer customers some form of renewable electricity through our power provider, as an upgraded service, as a percentage of our total number of facilities.

CLIMATE IMPACT

This section provides the precise metrics and scoping for our climate impact and carbon accounting primary metrics.

SCOPE 1, 2, AND 3 EMISSIONS

Scope 1 includes emissions from diesel, natural gas, and refrigerant loss, while Scope 2 includes both emissions from customer IT equipment electricity and electricity used to service common areas and data halls, including cooling. Scope 2 emissions are reported in both market-based (including the effect of both renewable electricity contracts and supplier-specific emission factors) and location-based methods (using subregional or national grid averages).

Our Scope 3 emissions are not directly emitted by CyrusOne. These emissions are from sources indirectly associated with CyrusOne, such as construction materials (capital goods), fuel and energy-related activities, business travel, employee commuting, and customer-operated facilities (downstream leased assets). Note that customer IT equipment inside facilities that we operate are counted as Scope 2 emissions.

CLIMATE IMPACT METRICS

CARBON INTENSITY

We measure carbon intensity in several ways to give us different perspectives:

- Carbon Usage Effectiveness (CUE) (kg CO₂e/IT kWh)
- Grid Carbon Intensity (MTCO₂e/MWh)
- Building Carbon Intensity (MTCO₂e /ft²)

METRIC: CARBON USAGE EFFECTIVENESS (CUE)

Carbon Usage Effectiveness is the ratio of total carbon (including electricity, fuels, and refrigerant loss) to the electricity delivered to IT Equipment. In the denominator, electricity delivered to IT Equipment is used as an indicator of activity. Since over 99% of our Scope 1 and Scope 2 carbon emissions are due to electricity consumption, PUE and CUE are closely related within a facility, but can vary between facilities based on the source of electricity.

Using the standard calculations developed by The Green Grid, CUE is a measurement that determines how efficiently we provide support services to our customers' IT equipment. CUE measures the total carbon from a facility divided by the energy used by customer IT equipment. Thus, CUE has a theoretical minimum of 0 kg CO₂e/IT kWh (indicating no carbon is generated by the facility's operations). When taking averages of this metric, we only include *built-out* facilities that we manage directly to avoid the volatility of *pre-built-out* facilities and those out of our operational control.

METRIC: GRID CARBON INTENSITY

We monitor grid carbon intensity as the carbon emitted per megawatt-hour (MWh) delivered to our facilities from the grid (as a subregional or national average). This is measured in metric tons of carbon dioxide-equivalent per MWh of electricity (MTCO₂e/MWh). It gives us an indication of how carbon-intensive the grid is and helps us prioritize our renewable energy transition strategy. It also is used to calculate location-based Scope 2 carbon emissions.

METRIC: BUILDING CARBON INTENSITY

We measure building carbon intensity as the carbon use per *built-out* colocation building area in our facilities. This is measured in metric tons of carbon dioxide equivalent per square foot (MTCO₂e/ft²). It gives us an indication of how carbon-dense each facility is, and is a secondary measurement of the carbon relative to the size of different buildings.

WATER CONSERVATION METRICS

This section provides additional detail about the precise metrics and scoping for our primary metrics for water conservation and restoration. The way we interpret the significance of these water metrics is that water withdrawal describes the potential impact of regional water scarcity on our facilities while water consumption describes the impact of our facilities on potential regional water scarcity.

METRIC: ABSOLUTE WATER WITHDRAWAL

Withdrawn water is the total water taken in by our facilities, regardless of whether the water goes toward cooling, facility maintenance, or domestic water uses. Net withdrawn water is the total water taken in by our facilities, regardless of how it is used, minus the amount of water restored by WRCs. All sources of withdrawn water are municipal supply except for the geothermal cooling system at our Cincinnati (CIN4) facility in Hamilton, Ohio, which is described below.

METRIC: ABSOLUTE WATER CONSUMPTION AND DISCHARGE

Once inside our facilities, water is either discharged to water treatment works (such as industrial or domestic wastewater treatment) and returned to the watershed, or it is consumed through evaporative cooling or irrigation. Since our consumption of water removes it from the watershed, this serves as an indication of our impact on potential regional water scarcity.

Due to a lack of submetering, we assume that all water used at our few facilities that use water-consuming cooling (*wet* facilities) was consumed, even though some of it is domestic and facility maintenance water that is discharged for local treatment. Similarly, at our *dry* facilities, we assume that all water is discharged for treatment, even though some portion of it is consumed through humidification and landscape irrigation.

GEOTHERMAL COOLING THROUGHPUT (WITHDRAWAL AND DISCHARGE)

At our Cincinnati (CIN4) facility in Hamilton, Ohio we use a geothermal cooling system that pumps groundwater through the facility, using its low ambient temperature for cooling. After cooling our facility, the water is then discharged to surface waters. This geothermal water is not evaporated (consumed) and does not need treatment, so its net impact on the watershed is minimal. Because the scale of the throughput of this system dwarfs our other water metrics, we report it separately so that other changes in our total portfolio are visible.

METRIC: ABSOLUTE WATER WITHDRAWAL, CONSUMPTION, AND DISCHARGE IN HIGH-STRESS REGIONS

To focus our attention on areas where water is scarce, we track the total water withdrawal, consumption, and discharge from regions listed as currently in *high* or *extremely high* stress, according to the Aqueduct Water Risk Atlas. This is a helpful metric because it is a risk-based approach that focuses on where we are removing water from regions that have little of it. The limitation of this metric is that it does not, in itself, take into account future water stress and how it is projected to change. We compensate for this limitation by using our water risk assessment to incorporate future water stress into our planning.

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METRIC: ONSITE WATER USAGE EFFECTIVENESS (WUE SITE)

The standard metric for measuring water efficiency in data centers is Onsite Water Usage Effectiveness (WUE Site). This metric was created by The Green Grid specifically for data centers to understand and compare their water impact. WUE Site is a ratio of annual onsite water use to IT equipment energy and is measured in liters per kilowatt-hour (L/kWh). This metric allows us to understand how much water we are using in our facility operations relative to our customers' data operations. Since IT equipment energy use drives the need for cooling, in wet facilities, water use is linked with energy use, and an increase in IT equipment energy leads to an increase in water consumption. By the Green Grid standard, WUE Site should only be calculated using water that is used for IT equipment support. Other water use, like facility maintenance (cleaning, irrigation, etc.) and domestic use (bathrooms, break rooms, etc.), can be excluded. However, because our facilities tend to use such little water, we do not submeter the different water uses. Thus, our calculations of WUE Site include all uses of water at the facility, conservatively overstating them compared to the ideal calculation.

METRIC: TOTAL WATER USAGE EFFECTIVENESS (WUE SOURCE)

In contrast with WUE Site, which measures only the onsite water efficiency of a data center, WUE Source is used to estimate a facility's total regional water burden. If the electricity used by a data center comes from thermoelectric generation sources, large amounts of water will be consumed in the production of that electricity. We refer to this indirect water consumption as "energy supply chain water". WUE Source is a ratio of the total water consumed by the facility (onsite consumption plus estimated energy supply chain water consumption) to IT equipment energy, measured in liters per kilowatt-hour (L/kWh). Supply chain water estimates are based on the World Resource Institute's [Guidance for Calculating Water Use Embedded in Purchased Electricity](#).

METRIC: NET POSITIVE WATER FACILITY

We consider a facility to have reached *net positive water* if, after reducing water use onsite through efficiency, we are able to partner with environmental nonprofits to restore water flows in these regions in excess of the water that we use. To ensure that the positive portion is not just a token amount (such as 1 gallon), we consider a facility to be a *net positive water* facility if we can restore at least 20% more water than we use. For example, if a facility uses 5 million gallons of water and we restore at least 6 million gallons of water, we designate it as a *net positive water* facility.

BIODIVERSITY METRICS

This section provides additional detail about the precise metrics and scoping for our primary metrics for habitat improvement. This is our newest topic, so we are still developing these metrics.

METRIC: FACILITIES WITH IMPROVED HABITAT

To measure progress toward our target, we will track and report how many of our facilities have some improved habitat onsite that supports biodiversity in the area. Since, according to the Wildlife Habitat Council, [small spaces can have big impacts](#), this metric counts a facility if it has at least 100 square feet of improved habitat, such as a pollinator garden or migratory waystation. As a percentage this is divided by the number of facilities that have landscaping (not including some urban facilities that have no plantable landscape). This metric tells us how widespread our habitat network has become rather than the total land area improved.

SUPPLY CHAIN DIVERSITY METRICS

This section provides additional detail about the precise metrics and scoping for our primary metrics for supply chain diversity.

METRIC: DIVERSE SUPPLY CHAIN PERCENTAGE

We track the percentage of our supply chain spend that goes to small businesses, or businesses owned by minorities, women, veterans, disabled, or otherwise disadvantaged owners.

OCCUPATIONAL SAFETY METRICS

This section provides additional detail about the precise metrics and scoping for our primary metrics for health and safety.

INJURY CATEGORIES

- **Fatalities:** A death resulting from a work-related incident or exposure.
- **Recordable Cases:** Any work-related injury or illness that results in a fatality, loss of consciousness, days away from work, restricted work or transfer to another job, medical treatment beyond first aid, work-related diagnosed case of cancer, chronic irreversible diseases, fractured or cracked bones or teeth, and punctured eardrums.
- **Lost Workday Cases:** Any work-related injury or illness that results in one or more days away from work for recovery.
- **Restricted/Transfer of Duty Cases:** Any work-related injury or illness that results in one or more days of restricted work or a job transfer (the injured person returns to work, but cannot perform their primary job function).
- **Other Recordable Cases:** Any recordable injury or illness where a worker received medical treatment beyond first aid, but that did not involve a fatality, one or more days away from work, or one or more days of restricted work or job transfer.
- **First Aid Cases:** Any injury or illness that can be treated with basic first aid treatment or over-the-counter medication.
- **Near Miss Incident:** A reported incident in which no personal injury or property damage was sustained, but had the potential to do so. We see finding and recording near miss incidents is an indication of a well-functioning safety management system and key to identifying hazards and preventing actual injuries.

INJURY SEVERITY INDICATORS

- **Days Away from Work:** Total number of days that a worker was unable to work due to work-related injury or illness.
- **Days Restricted/Transfer of Duty:** Total number of days that a worker was on restricted work duty or job transfer due to work-related injury or illness.

INJURY INTENSITY RATES

- **Total Hours Worked:** Total number of hours worked by CyrusOne employees or contractors for each given year. This is typically normalized as rates per 200,000 hours worked (the typical number of hours worked by a full-time employee in one year).
- **Lost Time Injury Rate:** Number of Lost Workday Cases per 200,000 Total Hours Worked.
- **Days Away Restricted or Transferred (DART) Rate:** Number of Lost Workday and Restricted/Transfer of Duty Cases per 200,000 Total Hours Worked.
- **Total Recordable Incident Rate (TRIR):** Number of Total Recordable Cases per 200,000 Total Hours Worked.

CHEMICAL SPILL REPORTING METRICS

- **Reportable Spills with Environmental Impact:** Spills significant enough to require reporting to local environmental agencies that were determined to have impacted local soil or water (spills not contained on pavement or retention).
- **Reportable Spills without Environmental Impact:** Spills significant enough to require reporting to local environmental agencies that did not impact local soil or water (spills contained on pavement or retention and cleaned up).

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APPENDIX 3: STANDARDIZED METRICS

GRI METRICS SUMMARY TABLE

GRI Index	Metric	Response
General		
102-1	Name of org	CyrusOne LP
102-2	Activities, brands, products, and services	Colocation data centers for the world's largest companies
102-3	Location of headquarters	2850 N Harwood St., Suite 2200 Dallas, Texas 75201
102-4	Location of operations	CyrusOne Locations
102-5	Ownership and legal form	Privately-held company
102-6	Markets served	Markets are served in the North American and European markets with partnerships extending to South America and Asia. Our main clients are either enterprise IT departments in companies or hyperscale cloud services.
102-7i	Number of employees	512 (as of end of CY2022)
102-7ii	Number of operations	51 data centers
102-7III	Net sales/net revenues	Not reported as a privately-held company
102-7iv	Total capitalizations (debt and equity)	Not reported as a privately-held company
102-7v	Quantity of products/services provided	4,779,501 colocation square feet (Does not include leasable office space)
102-8a	Total number of employees by employment contract (permanent and temporary), by gender	Permanent: Male (396), Female (99), Decline to State (17); Temporary: Male (0), Female (0), Decline to State (0)
102-8b	Total number of employees by employment contract (permanent and temporary), by region	Permanent: North America (355), Europe (157), Asia (0); Temporary: North America (0), Europe (0), Asia (0)

GRI Index	Metric	Response
102-8c	Total number of employees by employment type (full-time and part-time), by gender	Full-Time: Male (394), Female (98), Decline to State (17); Part-Time: Male (2), Female (1), Decline to State (0)
102-8d	Whether a significant portion of the organization's activities are performed by workers who are not employees. If applicable, a description of the nature and scale of work performed by workers who are not employees	CyrusOne Employees (512, 29%), Contractors: - Security (516, 30%) - Facility Management (329, 19%) - IT (247, 14%) - Design & Construction (42, 2%) - Other (102, 6%)
102-8e	Any significant variations in the numbers reported in Disclosures 102-8-a, 102-8-b, and 102-8-c	No significant variations.
102-8f	An explanation of how the data have been compiled, including any assumptions made	Employee information database populated by new-hire process. The data is a snapshot from December 31, 2022.
102-10	Significant changes to the organization's size, structure, ownership, or supply chain	After many years as a public company, CyrusOne was acquired in 2022 by funds managed by KKR, a leading global investment firm, and Global Infrastructure Partners ("GIP"), one of the world's leading infrastructure investors.

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102-11	Whether and how the organization applies the Precautionary Principle or approach	<p>CyrusOne integrates the Precautionary Principle (as defined by the UN Framework Convention on Climate Change) into our thorough risk management processes. We believe that a reliance on science is essential, and this informs our current action to mitigate environmental impacts to ensure a better future for our company and the communities in which we operate.</p> <p>This is demonstrated by our <i>climate neutral</i> targets, our action on reducing water stress based on future projections, and an emphasis on improving habitat — all based on the best available scientific knowledge. Since these are threats of serious or irreversible damage, we are not postponing measures to minimize or mitigate the adverse effects of our operations. Our participation in industry groups and commitment to transparency furthers our position to exceed standards and maintain relevance.</p>
102-12	A list of externally-developed economic, environmental and social charters, principles, or other initiatives to which the organization subscribes, or which it endorses	CyrusOne aligns its targets with the UN Sustainable Development Goals at the indicator level. CyrusOne is a founding member of the <i>Climate Neutral</i> Data Centre Pact, which applies to all of our European facilities. Our near-term carbon target has been validated by the Science Based Targets initiative (SBTi).
102-13	A list of the main memberships of industry or other associations, and national or international	Data Center Coalition (US), European Data Centre Association (EUDCA, international), Dutch Data Center Association, France Datacenter Association, German Datacenter Association, Host In Ireland, Infrastructure Masons (international), techUK, Data Centre Trade Association (DCA), Tech Titans, Clean Energy Buyers Association (CEBA)

GRI Index	Metric	Response
102-14	A statement from the most senior decision-maker of the organization (such as CEO, chair, or equivalent senior position) about the relevance of sustainability to the organization and its strategy for addressing sustainability	Letter from the CEO in Chapter 1, Introduction
102-16	A description of the organization's values, principles, standards, and norms of behavior	See Employee Code of Conduct
102-18a	Governance structure of the organization, including committees of the highest governance body	Described in Governance chapter, ESG Governance
102-18b	Committees responsible for decision-making on economic, environmental, and social topics	Described in Governance chapter, ESG Governance
102-40	A list of stakeholder groups engaged by the organization	Customers, Employees, Community
102-41	Percentage of total employees covered by collective bargaining agreements	No CyrusOne employees (0%) are covered by collective bargaining agreements.
102-42	The basis for identifying and selecting stakeholders with whom to engage	We engage with stakeholders that contact us and have identified the stakeholders most closely affected by our business: Customers and Employees.
102-43	The organization's approach to stakeholder engagement, including frequency of engagement by type and by stakeholder group, and an indication of whether any of the engagement was undertaken specifically as part of the report preparation process	We do not have any group-wide stakeholder engagement governance structure in place.

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102-44	Key topics and concerns that have been raised through stakeholder engagement including: how the organization has responded to those key topics and concerns including through its reporting; the stakeholder groups that raised each of the key topics and concerns	We have added reporting on good neighbor responsibility based on customer feedback on our previous reports. The most commonly raised issues from customers are carbon, renewable energy, water resources, and safety.
102-45a	A list of all entities included in the organization's consolidated financial statements or equivalent documents	As a privately-held entity, CyrusOne does not disclose financial statements. Data shared includes activities by all subsidiaries of CyrusOne Inc.
102-45b	Whether any entity included in the organization's consolidated financial statements or equivalent documents is not covered by the report	No, all subsidiaries are covered by our report.
102-46	An explanation of the process for designing the report content and topic boundaries; how org has implemented reporting principles for defining report content	Described in Governance chapter, ESG Strategy and ESG Reporting
102-47	A list of the material topics identified in the process for defining report content	See Priorities and Materiality

GRI Index	Metric	Response
102-48	The effect of any restatements of information given in previous reports and the reasons for such restatements	The sale of several data centers as ongoing operations required removing their data from baselines and prior year calculations. The addition of customer-procured renewables to our renewable electricity required restating prior years of renewable percentages and greenhouse gas emissions calculations.
102-49	Significant changes from previous reporting periods in the list of material topics and topic boundaries	After becoming a privately-held company, Board Independence was removed as a material topic for Governance.
102-50	Reporting period for the information provided	CY2022
102-51	If applicable, the date of the most recent previous report	July 2022
102-52	Reporting cycle	Annual
102-53	The contact point for questions regarding the report or its contents.	Kyle Myers, Vice President of Environmental Health, Safety, and Sustainability
102-54	The claim if the report has been prepared in accordance with GRI	This report has been prepared in accordance with the GRI Standards: Core option.
102-55a, b	The GRI content index, which specifies each of the GRI Standards used and lists all disclosures included in the report	This table serves as the content index.
102-56	A description of the organization's policy and practice with regard to seeking external assurance for the report	We have obtained data assurance for this report from ISOS Group, Inc., covering Energy, Scope 1 – 3 GHG emissions, Water, Waste, Occupational safety metrics, Workforce DE&I metrics, and Diverse supply chain spend.

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Energy		
103-1	For each material topic: Why is it material; the boundary for topic (where impacts occur, org's involvement with impacts); specific limitation regarding topic boundary)	Described in Environmental Impact chapter, Energy and Building for Sustainability
103-2	For each material topic: how org manages topic, purpose of management approach, description of the policies, commitments, goals/targets, responsibilities, resources, grievance mechanisms, other specific actions	Described in Environmental Impact chapter, Energy and Building for Sustainability
103-3	For each material topic: how org evaluates management approach (process, results, related adjustments to approach)	Described in Environmental Impact chapter, Energy and Building for Sustainability
302-1a	Total fuel consumption within the organization from non-renewable sources, in joules or multiples, and including fuel types used	Total Fuel Consumption: 29,934 MWh-eq Natural Gas (23.4%): 7,014 MWh-eq Diesel (76.6%): 22,920 MWh-eq
302-1b	Total fuel consumption within the organization from renewable sources, in joules or multiples, and including fuel types used	No renewable fuels consumed.
302-1c	Total electricity consumption	Total Electricity Consumption: 3,352,015 MWh Grid Energy (48.6%): 1,630,480 MWh Purchased Renewables (51.4%): 1,721,535 MWh We do not consume purchased hot water, chilled water, or steam.
302-1d	Total electricity sold	None

GRI Index	Metric	Response
302-1e-g	Total energy consumption within the organization, including methods and assumptions in the calculations	Total Energy Consumption: 3,381,949 MWh-eq Electricity (99.1%): 3,352,015 MWh Fuels (0.9%): 29,934 MWh-eq Calculation based on purchased electricity and fuels. Conversion factors from ICT Footprint (European Framework Initiative for Energy & Environmental Efficiency in the ICT Sector) for diesel energy content, NREL: https://openei.org/wiki/Definition:Therm . The energy consumption data covers 100% of directly managed colocation floor area of portfolio.
302-2	Energy consumption outside the organization	No energy is consumed outside of the organization.
302-3	Building energy intensity (by organization specific metric); intensity ratio for the organization	0.865 MWh/ <i>built-out</i> colocation square foot across all directly managed facilities, including electricity, natural gas, and diesel consumption within the organization.
Water		
103-1	For each material topic: Why is it material; the boundary for topic (where impacts occur, org's involvement with impacts); specific limitation regarding topic boundary)	Described in Environmental Impact chapter, Water and Building for Sustainability
103-2	For each material topic: how org manages topic, purpose of management approach, description of the policies, commitments, goals/targets, responsibilities, resources, grievance mechanisms, other specific actions	Described in Environmental Impact chapter, Water and Building for Sustainability
103-3	For each material topic: how org evaluates management approach (process, results, related adjustments to approach)	Described in Environmental Impact chapter, Water and Building for Sustainability

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GRI Index	Metric	Response
303-3 (withdrawal), 303-5ab (consumption)	Total water withdrawal, consumption, and discharge	<p>All Facilities</p> <p>Water withdrawn: 1,266 ML Water discharged: 119 ML Water consumed: 1,147 ML Water restored: 66 ML</p> <p>High Water Stress Facilities</p> <p>Water withdrawn: 767 ML Water discharged: 57 ML Water consumed: 710 ML Water restored: 66 ML</p> <p>Geothermal System</p> <p>Water withdrawn: 2,984 ML Water discharged: 2,984 ML Water consumed: 0 ML</p>
303-3d	Any contextual information necessary to understand how the data have been compiled, such as any standards, methodologies, and assumptions used	<p>At this time, we are assuming that, in facilities that use evaporation for cooling, 100% of the metered water is consumed (though some water is used for domestic and facility maintenance purposes and then discharged).</p> <p>In facilities that do not use evaporation for cooling, we assume that 100% of the metered water is discharged (though some is consumed through irrigation).</p> <p>In general metrics, we have separated our geothermal cooling system, which pumps 2,984 ML per year of groundwater for non-evaporative cooling and returns it to the watershed.</p>
303-5c	Change in water storage in megaliters, if water storage has been identified as having a significant water-related impact	Water storage does not have a significant impact.

GRI Index	Metric	Response
303-5d	Any contextual information necessary to understand how the data have been compiled, such as any standards, methodologies, and assumptions used, including whether the information is calculated, estimated, modeled, or sourced from direct measurements, and the approach taken for this, such as the use of any sector-specific factors	Water withdrawal data sourced from utility billing. Geothermal cooling system data calculated using constant pumping rate.
Biodiversity		
103-1	For each material topic: Why is it material; the boundary for topic (where impacts occur, org's involvement with impacts); specific limitation regarding topic boundary)	Described in Environmental Impact chapter, Biodiversity and Building for Sustainability
103-2	For each material topic: how org manages topic, purpose of management approach, description of the policies, commitments, goals/targets, responsibilities, resources, grievance mechanisms, other specific actions	Described in Environmental Impact chapter, Biodiversity and Building for Sustainability
103-3	For each material topic: how org evaluates management approach (process, results, related adjustments to approach)	Described in Environmental Impact chapter, Biodiversity and Building for Sustainability
304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	None identified, as verified by a Protected Areas Assessment
304-2	Significant impacts of activities, products, and services on biodiversity	No significant impacts of activities on biodiversity, as verified by a Protected Areas Assessment

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GRI Index	Metric	Response
304-2a	Nature of significant direct and indirect impacts on biodiversity with reference to one or more of the following: i. Construction or use of manufacturing plants, mines, and transport infrastructure; ii. Pollution (introduction of substances that do not naturally occur in the habitat from point and non-point sources); iii. Introduction of invasive species, pests, and pathogens; iv. Reduction of species; v. Habitat conversion; vi. Changes in ecological processes outside the natural range of variation (such as salinity or changes in groundwater level)	None identified, as verified by our Environmental Impact Assessments
304-2b	Significant direct and indirect positive and negative impacts with reference to the following: i. Species affected; ii. Extent of areas impacted; iii. Duration of impacts; iv. Reversibility or irreversibility of the impacts.	None identified, as verified by our Environmental Impact Assessments

GRI Index	Metric	Response
304-3a	Size and location of all habitat areas protected or restored, and whether the success of the restoration measure was or is approved by independent external professionals	Dublin I improved habitat landscaping is 1.27 hectares. The landscape habitat was designed and installed by a landscape contractor with native plant habitat expertise and based on ecological assessments performed at the site before construction. Pollinator monitoring began in CY2021 with the help of an external group, DCS for Bees. Allen and Carrollton (Texas) improved habitat landscaping cover 0.3 hectares. The landscapes were designed and installed by a landscape contractor with native plant habitat expertise and the Allen habitat was certified by the National Wildlife Federation's (NWF) Certified Wildlife Habitat® program.
304-3b	Whether partnerships exist with third parties to protect or restore habitat areas distinct from where the organization has overseen and implemented restoration or protection measures	Partnership with Bonneville Environmental Foundation, The Nature Conservancy, and Natural Resource Conservation Service to restore water flows to Texas and Arizona rivers.
304-3c	Status of each area based on its condition at the close of the reporting period	See Environmental Impact chapter, Biodiversity
304-3d	Standards, methodologies, and assumptions used	Bonneville Environmental Foundation Water Restoration Certificates® methodology
304-4	IUCN red list species and national conservation list species with habitats in areas affected by operations (Critically endangered, endangered vulnerable, near threatened, least concerned)	IUCN red list species and national conservation list species with habitats in areas affected by operations: none

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GRI Index	Metric	Response
Emissions		
103-1	For each material topic: Why is it material; the boundary for topic (where impacts occur, org's involvement with impacts); specific limitation regarding topic boundary)	Described in Environmental Impact chapter, Climate Impact and Building for Sustainability
103-2	For each material topic: how org manages topic, purpose of management approach, description of the policies, commitments, goals/targets, responsibilities, resources, grievance mechanisms, other specific actions	Described in Environmental Impact chapter, Climate Impact and Building for Sustainability
103-3	For each material topic: how org evaluates management approach (process, results, related adjustments to approach)	Described in Environmental Impact chapter, Climate Impact and Building for Sustainability

GRI Index	Metric	Response
305-1,2,3	GHG emissions (Scope 1, 2, and 3), including methods and approach for calculations	<p>CY22 Greenhouse Gas Emissions, in metric tonnes CO₂ equivalent (MTCO₂e)</p> <p>Scope 1 GHG Emissions (direct emissions): 24,268 MTCO₂e</p> <p>Scope 2 GHG Emissions, Market-based (indirect emissions from purchased electricity): 590,232 MTCO₂e</p> <p>Scope 2 GHG Emissions, Location-based (indirect emissions from purchased electricity): 1,146,054 MTCO₂e</p> <p>Scope 3 GHG Emissions Estimate (indirect emissions from other sources): 296,914 MTCO₂e</p> <p>Verified Carbon Offsets: 1,336 MTCO₂e (equal to Scope 1 emissions at facilities with 100% renewable electricity)</p> <p>Scope 3 categories included in estimate: Capital Goods (Construction Materials), Fuel-and-energy-related Activities, Business Travel, Employee Commuting, Downstream Leased Assets (Customer-operated Facilities)</p> <p>Calculations performed according to WRI GHG Protocol. Emissions factors from: US EPA EGrid data, EU Europa. Includes carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and refrigerants (HFCs). Emissions consolidated based on operational control. The baseline year is currently 2018 (the earliest year of data available).</p>
305-4	GHG emissions intensity, including organization specific metric and gases included in the calculation	<p>CY22 Greenhouse Gas Emissions Intensity</p> <p>Scope 1+2 intensity: 0.156 MTCO₂e/ft²</p> <p>Our metric for the denominator of intensity calculations is <i>built-out</i> colocation square feet that are directly managed by CyrusOne, and calculations include carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and refrigerants (HFCs).</p>

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GRI Index	Metric	Response
Effluents and Waste		
306-3	Total number and total volume of recorded significant spills	Reported in Employee Occupational Safety
Compliance		
307-1a,b	<p>Significant fines and non-monetary sanctions for non-compliance with environmental laws and/or regulations in terms of:</p> <ul style="list-style-type: none"> i. total monetary value of significant fines; ii. total number of non-monetary sanctions; iii. cases brought through dispute resolution mechanisms. <p>If the organization has not identified any non-compliance with environmental laws and/or regulations, a brief statement of this fact is sufficient.</p>	No significant fines or sanctions. Significance defined as \$100,000 of fines or impact per violation.

SASB METRICS SUMMARY TABLE

SASB Index	Metric	Response
General		
IF-RE-000.A	Number of operations	53 data centers
IF-RE-000. B-D	Quantity of products/ services provided	4,779,501 colocation square feet (Does not include leasable office space)
IF-RE-130a.4	Percentage of eligible portfolio that has an energy/sustainability rating by property subsector	Percentage of portfolio with an energy/sustainability rating, by floor area: 14.8%
IF-RE-130a.4	Percentage of eligible portfolio that (2) is certified to ENERGY STAR, by property subsector	Percentage of portfolio that is ENERGY STAR certified, by floor area: 39%
TC-IM-130a.3	Discussion of the integration of environmental considerations into strategic planning for data center needs	See ESG Strategy section in Corporate Governance and the Building for Sustainability section in Environmental Impact.
Energy		
IF-RE-130a. 2.1-3	Total energy consumption within the organization, including methods and assumptions in the calculations	<p>Total Energy Consumption: 3,381,949 MWh-eq</p> <p>Electricity (99.1%): 3,352,015 MWh</p> <p>Grid Energy: 1,630,480 MWh</p> <p>Purchased Renewables: 1,721,535 MWh</p> <p>Fuels (0.9%): 29,934 MWh-eq</p> <p>Natural Gas: 7,014 MWh-eq</p> <p>Diesel: 22,920 MWh-eq</p> <p>Calculation based on purchased electricity and fuels. Conversion factors from ICT Footprint (European Framework Initiative for Energy & Environmental Efficiency in the ICT Sector) for diesel energy content, NREL: https://openei.org/wiki/Definition:Therm. The energy consumption data covers 100% of directly managed colocation floor area of portfolio.</p>

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SASB Index	Metric	Response
IF-RE-130a.3	Like-for-like percentage change in energy consumption for the portfolio area with data coverage, by property subsector	From 2021 to 2022, there was a 10% increase in total energy
IF-RE-130a.5	Description of how building energy management considerations are integrated into property investment analysis and operational strategy	Described in Environmental Impact chapter, Energy and Climate Impact
IF-RE-410a.2	Percentage of tenants that are separately metered or submetered for grid electricity consumption, by property subsector	100% of tenants' IT equipment are submetered for electricity
Climate Risk		
IF-RE-450a.1	Area of properties located in 100-year flood zones (flood hazard zones), by property subsector	Area of properties in flood hazard (100-year flood) zones: 51,290 ft ² (covered by Building Elevation Certificate to show mitigation measures)
IF-RE-450a.2	Description of climate change risk exposure analysis, degree of systematic portfolio exposure, and strategies for mitigating risks	Climate risk assessment is summarized in the Enterprise Risk Management section of Corporate Governance.
Water		
IF-RE-140a.1.1, 1.2	Water withdrawal data coverage	Data coverage: Only includes open facilities for which water data is available, covering 97% of portfolio (and 99% of areas in high and extremely high water stress). Data is not available for some smaller leased facilities.

SASB Index	Metric	Response
IF-RE-140a.2.2, TC-IM-130a.2.1	Total water withdrawal, consumption, and discharge	<p>All Facilities</p> <p>Water withdrawn: 1,266 ML Water discharged: 119 ML Water consumed: 1,147 ML Water restored: 66 ML</p> <p>High Water Stress Facilities</p> <p>Water withdrawn: 767 ML Water discharged: 57 ML Water consumed: 710 ML Water restored: 66 ML</p> <p>Geothermal System</p> <p>Water withdrawn: 2,984 ML Water discharged: 2,984 ML Water consumed: 0 ML</p>
IF-RE-140a.3	Like-for-like percentage change in water withdrawn for portfolio area with data coverage, by property subsector	From 2018 to 2022, water withdrawal increased by 94% across all buildings in the portfolio with data coverage. From 2021 to 2022, withdrawal decreased by 7%.
IF-RE-140a.4	Description of water management risks and discussion of strategies and practices to mitigate those risks	Described in Environmental Impact chapter, Water
IF-RE-410a.2	Percentage of tenants that are separately metered or submetered for water withdrawals, by property subsector	Not applicable (customer IT equipment do not directly use water).

TCFD METRICS SUMMARY TABLE

Metric	Response
General	
A breakdown of reserves and an indication of associated emissions factors to provide insight into potential future emissions	Not applicable.
Percentage of eligible portfolio that has an energy/sustainability rating by property subsector	Percentage of portfolio with an energy/sustainability rating, by floor area: 39%
Climate Risk	
Area of properties located in 100-year flood zones (flood hazard zones), by property subsector	Area of properties in flood hazard (100-year flood) zones: 51,290 ft ² (covered by Building Elevation Certificate to show mitigation measures)
Emissions	
GHG emissions intensity, including organization specific metric and gases included in the calculation	Scope 1+2 intensity: 0.156 MTCO ₂ e/ft ² Our metric for the denominator of intensity calculations is <i>built-out</i> colocation square feet that are directly managed by CyrusOne, and calculations include carbon dioxide (CO ₂), methane (CH ₄), nitrous oxide (N ₂ O), and refrigerants.
Energy	
Total fuel consumption within the organization from non-renewable sources, in joules or multiples, and including fuel types used	Total Fuel Consumption: 29,934 MWh-eq Natural Gas (23.4%): 7,014 MWh-eq Diesel (76.6%): 22,920 MWh-eq
Total energy consumption within the organization, including methods and assumptions in the calculations	Total Energy Consumption: 3,381,949 MWh-eq <i>Electricity</i> (99.1%): 3,352,015 MWh Grid Energy: 1,630,480 MWh Purchased Renewables: 1,721,535 MWh <i>Fuels</i> (0.9%): 29,934 MWh-eq Calculation based on purchased electricity and fuels. Conversion factors from ICT Footprint (European Framework Initiative for Energy & Environmental Efficiency in the ICT Sector) for diesel energy content, NREL: https://openei.org/wiki/Definition:Therm . The energy consumption data covers 100% of directly managed colocation floor area of portfolio.

Metric	Response
Expenditures (OpEx) for low-carbon alternatives (e.g., R&D, technology, products, or services)	Not Available
Investment (CapEx) in low-carbon alternatives (e.g., capital equipment or assets)	Not Available
Building energy intensity (by organization specific metric); intensity ratio for the organization	0.865 MWh/ <i>built-out</i> colocation square foot across all directly managed facilities, including electricity, natural gas, and diesel consumption within the organization
Water	
Total water withdrawal, consumption, and discharge	All Facilities Water withdrawn: 1,266 ML Water discharged: 119 ML Water consumed: 1,147 ML Water restored: 66 ML High Water Stress Facilities Water withdrawn: 767 ML Water discharged: 57 ML Water consumed: 710 ML Water restored: 66 ML Geothermal System Water withdrawn: 2,984 ML Water discharged: 2,984 ML Water consumed: 0 ML
Building water intensity (by occupants or square area)	Building water intensity (withdrawal only): 326 liters/ <i>built-out</i> colocation square feet Building water intensity (net water consumption): 320 liters/ <i>built-out</i> colocation square feet Net water consumption includes water restoration offsets

APPENDIX 4: ASSURANCE STATEMENT



Independent Assurance Statement

Provided by ISOS Group, Inc.
On selected environmental and social metrics included in:
CyrusOne’s 2023 Sustainability Report.

To the Management Team of CyrusOne:

ISOS Group, Inc. [“ISOS” or “we”] were engaged by CyrusOne [“Client”] to conduct moderate level type 2 assurance of environmental and social data to be reported in its 2023 Sustainability Report [“Report”], covering the period beginning January 1, 2022 and ending December 31, 2022.

We have performed our moderate assurance engagement in accordance with the AccountAbility 1000 Assurance Standard v3 (“AA1000AS”). Our review was limited to the data reported in CyrusOne’s 2023 Sustainability Report comprising of:

- Energy,
- Greenhouse gas emissions,
- Water,
- Waste,
- Occupational safety metrics,
- Workforce DEI metrics,
- Diverse supply chain spend.

We have not performed any procedures with respect to other information included in 2023 Sustainability Report and, therefore, no conclusion on the Report as a whole is expressed.

CyrusOne’s responsibilities

The Company’s management are responsible for:

- Preparing the data in accordance with generally accepted reporting practices,
- The accuracy and completeness of the information reported,
- The design, implementation and maintenance of internal controls relevant to the preparation of the report to provide reasonable assurance that the report is free from material misstatement, whether due to fraud or error,
- Ensuring the data performance is fairly stated in accordance with the applicable criteria and for the content and statements contained therein.

Criteria

The assurance process was intended to provide an independent opinion confirming that the Client has complied with procedures for data management at the company and minimized degrees of error by adequately:

1. Sourcing data to populate relevant data management systems,
2. Enforcing management and quality controls across the reporting period,
3. Aggregating and converting metrics into the correct unit of measure, and
4. Properly calculating and transposing total figures to disclosure mechanisms.

Boundary

Organizational Boundary	CyrusOne owns and operates carrier-neutral data centers in North America and Europe, where it provides colocation and peering services.
Reporting Boundary	The reporting boundary consists of all operational facilities within the organizational boundary. Facilities under development are excluded except for construction contractor safety metrics and diverse supply chain spend metrics.
Assurance Boundary	The assurance boundary was limited to the Client’s fifty-one (51) operational assets and included facilities under development for construction contractor safety and diverse supply chain spend metrics only.
Environmental Data Boundary	The GHG emissions boundary followed the operational control methodology specified in the GHG Protocol. The same boundary was applied for energy, water and waste metrics.

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Limitations and Exclusions

Greenhouse gas quantification is unavoidably subject to inherent uncertainty because of both scientific and estimation uncertainty and for other non-financial performance information the precision of different measurement techniques may also vary. Furthermore, the nature and methods used to determine such information, as well as the measurement criteria and the precision thereof, may change over time. No visit to the Client’s headquarters or facilities was conducted throughout this engagement. However, a sample set of properties were reviewed in more granularity and tested for data accuracy. It was determined that these limitations and exclusions do not materially impact the performance criteria or assurance engagement.

Methodology

The assurance procedures undertaken were to determine the strength of the systems in place. ISOS Group:

- Engaged a sample of individuals responsible for performance measurement,
- Evaluated current management systems for performance data collection, compilation, calculation, reporting, and validation,
- Determined consistency of assessing materiality, management approach, and application of quality control procedures,
- Reviewed sustainability disclosures, supporting data, and justification for rectifying discrepancies,
- Validated alignment to standard reporting protocols to ensure accurate claims to the quantitative methodology and approach and assurance claims,
- To verify quantitative claims, both at the aggregate level and on a sample basis, and test accuracy, consistency, completeness, and reliability, ISOS Group:
 1. Conducted a portfolio assessment analyzing performance results to uncover any errors, misstatements, gaps, or performance anomalies,
 2. Brought all findings to the Client’s attention to address and confirmed resolution,
 3. Selected the following properties for testing and analysis, including cross-reference to primary source data to uncover variances and address any exclusions and other limitations:
 - a. London I (UK)
 - b. Sterling VI (VA, USA)
 - c. Somerset (NY, USA)

Findings

Based on the process and procedures conducted, there is no evidence that the metrics reported by the Client are not materially correct. Our analysis suggests that these metrics provide a fair representation of the Client’s environmental and social impacts to stakeholders for the stated period and reporting boundary.

Observations

Observations include:

- To ensure timely reporting, CyrusOne’s energy, emissions, and water reporting is based upon nine months of actual data and three months of projected data. ISOS Group reviewed estimation methodologies and deemed this approach to not have a material impact on the final reported figures.
- Where actual waste tonnage is unavailable, waste data is estimated based on actual waste intensity for reporting sites.
- Supply chain spend data is based on actual data from the period 4Q21 – 3Q22. This does not appear to have a material impact on final figures.
- Diverse supply chain spend is aggregated per each diversity category for which a supplier qualifies.

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Application of the AA1000AP
Findings and conclusions concerning adherence to the AA1000 AccountAbility Principles:

Inclusivity	CyrusOne has identified four key stakeholder groups with whom it engages: Customers, Investors, Community, and Employees. CyrusOne could consider the development of a stakeholder map outlining engagement methods, expectations and results of engagement.
Materiality	CyrusOne outlines its materiality assessment process in its annual Sustainability Report. CyrusOne conducts its environmental materiality assessment separately from its social and governance materiality assessment. CyrusOne may consider a consolidated approach to prioritize ESG objectives.
Responsiveness	CyrusOne publishes an annual sustainability report outlining timely progress on key sustainability issues. The report is aligned to leading reporting standards and is both clear and extensive in its content.
Impact	CyrusOne outlines performance measurement within its sustainability report, including the criteria for and progress on its sustainability goals. CyrusOne has a validated GHG emissions reductions target by the Science-Based Target Initiative.


Restriction of use
 This assurance report is made solely to the Client in accordance with the terms of our engagement, which include agreed arrangements for disclosure. Our work has been undertaken so that we might state to the Client those matters we have been engaged to state in this moderate assurance report and for no other purpose. Our moderate assurance report should not be regarded as suitable to be used or relied on by any party wishing to acquire rights against us other than the Client for any purpose or in any context. Any party other than the Client who obtains access to our moderate assurance report or a copy thereof and chooses to rely on our moderate assurance report (or any part thereof) will do so at its own risk. To the fullest extent permitted by law, we accept or assume no responsibility and deny any liability to any party other than the Client for our work, for this independent moderate assurance report, or for the conclusions we have reached.


Statement of Competency and Independence
 ISOS Group is an independent professional services firm that specializes in sustainability reporting under the Global Resources Initiative (GRI), CDP, and GRESB and is a provider of external assurance services. ISOS Group is a Global Reporting Initiative Certified Training Partner for the United States and a CDP Silver Education and Training Partner in the United States. Our team of experts have the technical expertise and competency to conduct assurance to the AA1000 assurance standard, which meets the criteria for assurance of environmental and social data.


No member of the assurance team has a business relationship with the Client, its Directors, or Managers beyond that required of this assignment. We conducted this assurance independently and, to our knowledge, there has been no conflict of interest. ISOS Group has a strong code of ethics and maintains high ethical standards among its staff in their day-to-day business activities. The assurance team has extensive experience in conducting assurance engagements over environmental, social, ethical, and health and safety information systems and processes.

Further information, including a statement of competencies, can be found at www.isosgroup.com.

Signed on behalf of ISOS Group: San Diego, California – USA, April 27, 2023.


 Brian Noveck
 CSAP Practitioner


 ISOS Group


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